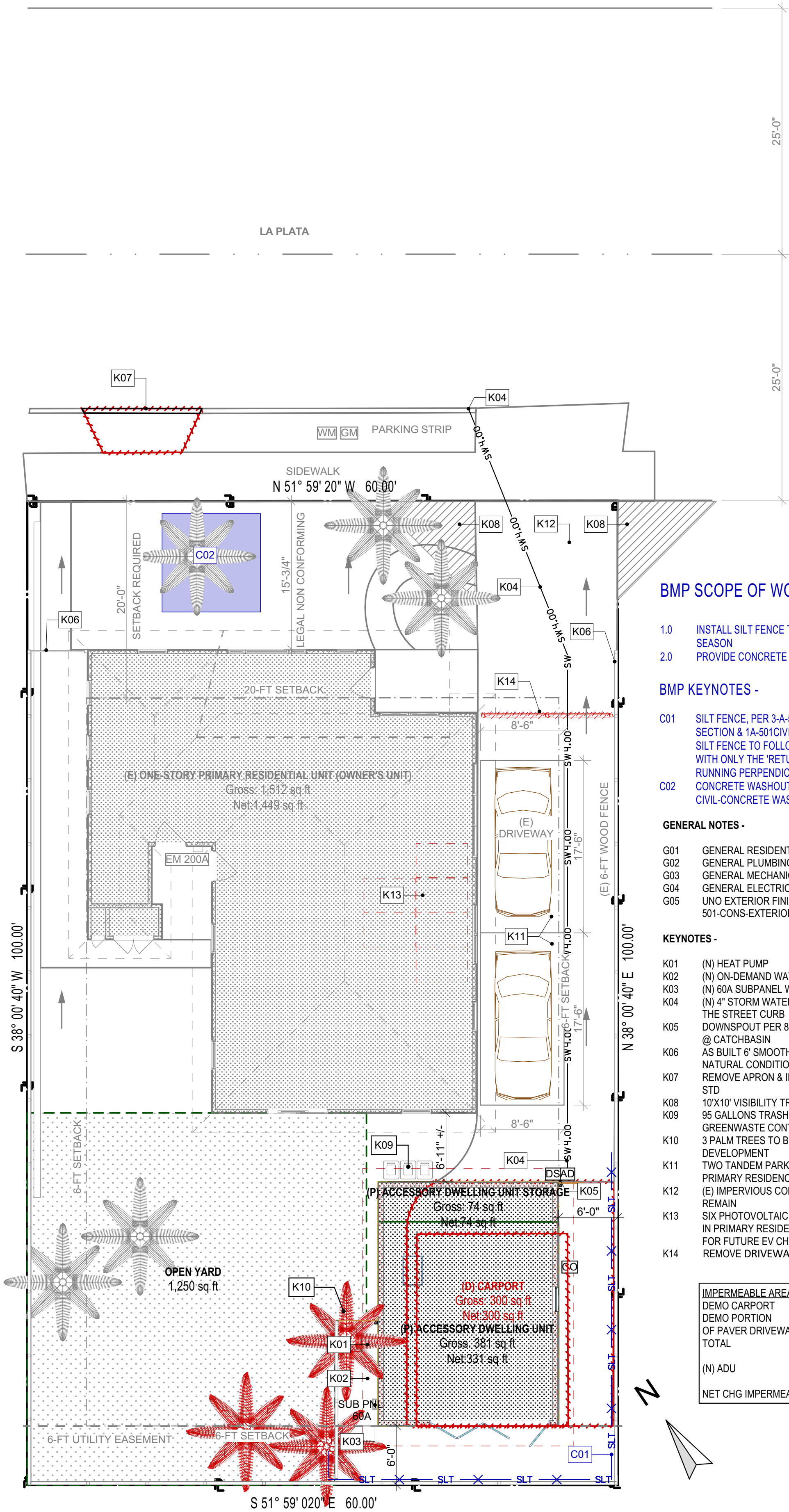


SITE PLAN LEGEND	
	AREA OF ADDITION
	AREA OF REMODEL
	AREA OF OPEN YARD
	AREA DRAIN
	BACKFLOW PREVENTION
	BALL VALVE
	BIO RETENTION BASIN
	BRI
	BRO
	CATCH BASIN
	CHANNEL/TRENCH DRAIN
	CLEANOUT
	CMU
	CUT
	DECOMPOSED GRANITE
	DECK DRAIN
	DEMOLISH
	DETENTION ZONE (DZ)
	DZI
	DOWNSPOUT
	DRAINAGE SLOPE
	DRIP IRRIGATION
	EASEMENT
	ELECTRIC METER
	ELEVATION (DEMO)
	ELEVATION (E)
	ELEVATION (N)
	ELECTROPHONE/CATV
	EXCAVATE & COMPACT (ESC)
	EXCAVATION DEPTH
	FIBER ROLL
	FILL
	FINISHED FLOOR ELEVATION
	FINISHED GRADE ELEVATION
	FIRE HYDRANT
	FREEBOARD
	GAS METER
	GAS PIPE
	GROUND VAULT
	HANDHOLE
	LANDSCAPE
	LIMIT OF DISTURBED AREA
	OVERFLOW INVERT
	OVERHEAD WIRES
	PAVER
	PER ARCH PLAN
	PER LANDSCAPE PLAN
	PIPE INVERT
	POWER POLE
	PROPERTY LINE
	REDUCED PRESSURE
	REDUCED PRESSURE/BACKFLOW PREVENTION
	RIP-RAP TO PREVENT EROSION
	ROUGH GRADE ELEVATION
	SELF RETAINING
	SELF TREATING
	SETBACK
	SEWER MANHOLE
	SEWER SANITARY
	SHUTOFF VALVE
	SIDEWALK
	SILT FENCE
	SLOPE OF GRADE 5% MIN FOR 10-FT AT FOUNDATION
	SPILLWAY INVERT
	SPOT ELEVATION (E)
	SPOT ELEVATION (N)
	STORM DRAIN MANHOLE
	STORMWATER (E)
	STORMWATER (N)
	SUBGRADE
	TOP OF CURB
	TOP OF DECK
	TOP OF FENCE
	TOP OF GRATE
	TOP OF PAVEMENT (Bt CONC, TILE, ETC)
	TOP OF WALL
	UPPER DOWNSPOUT
	UNLESS NOTED OTHERWISE
	WATER METER
	WATER SUPPLY PIPE COLD
	WATER SUPPLY PIPE HOT
	WALL DRAIN
	WETTED INVERT

MARCHETTI ADU

221 LA PLATA, SANTA BARBARA, CA



1 SITE PLAN
SCALE: 1/8" = 1'-0"

BMP SCOPE OF WORK

- 1.0 INSTALL SILT FENCE THROUGHOUT RAINY SEASON
- 2.0 PROVIDE CONCRETE WASHOUT AREA

BMP KEYNOTES -

- C01 SILT FENCE, PER 3-A-501-CIVIL-SILT FENCE SECTION & 1A-501-CIVIL-SILT FENCE ASSY. SILT FENCE TO FOLLOW LINE OF TERRAIN WITH ONLY THE 'RETURNS' AT EACH END RUNNING PERPENDICULAR TO GRADE
- C02 CONCRETE WASHOUT AREA AS PER 7-A-501-CIVIL-CONCRETE WASHOUT

GENERAL NOTES -

- G01 GENERAL RESIDENTIAL NOTES PER A-001
- G02 GENERAL PLUMBING NOTES PER A-001
- G03 GENERAL MECHANICAL NOTES PER A-001
- G04 GENERAL ELECTRICAL NOTES PER A-001
- G05 UNO EXTERIOR FINISHES @ GRADE PER 4-A-501-CONS-EXTERIOR FINISHES @ GRADE

KEYNOTES -

- K01 (N) HEAT PUMP
- K02 (N) ON-DEMAND WATER HEATER
- K03 (N) 60A SUBPANEL WITH SUB-METERING
- K04 (N) 4" STORM WATER PIPE TO DAYLIGHT AT THE STREET CURB
- K05 DOWNSPOUT PER 8-A-501-CIVIL-DOWNSPOUT @ CATCHBASIN
- K06 AS BUILT 6" SMOOTH CEDAR FENCE, LEFT IN A NATURAL CONDITION TO WEATHER
- K07 REMOVE APRON & INFILL @ CURB PER CITY STD
- K08 10'X10' VISIBILITY TRIANGLE
- K09 95 GALLONS TRASH, RECYCLE AND GREENWASTE CONTAINERS
- K10 3 PALM TREES TO BE REMOVED FOR SITE DEVELOPMENT
- K11 TWO TANDEM PARKING SPACES FOR PRIMARY RESIDENCE
- K12 (E) IMPERVIOUS CONCRETE DRIVEWAY TO REMAIN
- K13 SIX PHOTOVOLTAIC PANELS TO BE INSTALLED IN PRIMARY RESIDENCE ROOF AND PROVIDE FOR FUTURE EV CHARGING STATION
- K14 REMOVE DRIVEWAY GATE

IMPERMEABLE AREAS	300 SF
DEMO CARPORT	
DEMO PORTION OF PAVR DRIVEWAY	.97 SF
TOTAL	397 SF
(N) ADU	454 SF
NET CHG IMPERMEABLE	+57 SF

GN- GENERAL NOTES

- 1.0 ALL CONSTRUCTION SHALL CONFORM TO THE 2019 CBC, 2019 CRC, 2019 CMC, 2019 CEC, 2019 CPC, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, 2019 CFC, 2019 CA ENERGY COMMISSION STANDARDS & ALL CITY OF SANTA BARBARA AMENDMENTS AS ADOPTED IN SANTA BARBARA CITY ORDINANCE 5780.
- 2.0 MARBORG INDUSTRIES SHALL BE USED FOR ALL CONSTRUCTION WASTE AND RECYCLING
- 3.0 UNLESS NOTED OTHERWISE, ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PER THE APPLICABLE PROVISIONS OF THESE DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS
- 4.0 THESE DOCUMENTS CONVEY MINIMUM CONSTRUCTION REQUIREMENTS AND ARE TO BE USED WHERE THE APPLICABLE CONDITIONS OCCUR. MORE STRINGENT REQUIREMENTS STIPULATED WITHIN RELEVANT MANUFACTURER'S INSTALLATION INSTRUCTIONS WILL SUPERSEDE
- 5.0 ALL WORK TO BE PERFORMED BY LICENSED & INSURED CONTRACTOR
- 6.0 THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, AND TECHNIQUES FOR CONSTRUCTION
- 7.0 ALL OSHA REGULATIONS SHALL BE FOLLOWED. GENERAL CONTRACTOR & EACH SUB-CONTRACTOR RESPONSIBLE FOR JOB-SITE SAFETY
- 8.0 EACH SUBCONTRACTOR IS RESPONSIBLE FOR DEPOSITING DEBRIS RESULTING FROM THEIR WORK IN THE JOB-SITE CONTAINER
- 9.0 ALL DIMENSIONS, UNLESS OTHERWISE INDICATED, ARE TO FACE OF STUD, CONCRETE, OR MASONRY
- 10.0 SEE FORMS CF-1R & MF-1R SPECIFYING THE REQUIRED MANDATORY ENERGY FEATURES FOR: WALL/CEILING INSULATION, WINDOW AREAS AND TYPES, HVAC SYSTEMS AND EFFICIENCY, DUCT INSULATION AND TESTING, LIGHTING TYPE AND SWITCHING, AND PIPE/HEATER INSULATION. PROVIDE COMPLETED FORM CF-6R UPON FINAL INSTALLATION OF ALL ENERGY SYSTEMS
- 11.0 PROJECTS WITH ZONING MODIFICATION APPROVALS, WITHIN 12" OF A SETBACK, OR WHERE CONDITIONS WARRANT, MAY REQUIRE A SURVEY TO VERIFY PROPOSED FOOTPRINT OF THE STRUCTURE PRIOR TO FOOTING INSPECTION. PROVIDE SURVEYOR VERIFICATION TO INSPECTOR IF REQUESTED BY BUILDING OFFICIAL
- 12.0 UNO, ALL REFERENCED STRUCTURAL HARDWARE TO BE FROM SIMPSON STRONG-TIE (ESR-2523)
- 13.0 AT THE TIME OF FINAL INSPECTION, AN OPERATION AND MAINTENANCE MANUAL, COMPACT DISC, OR WEB BASED REFERENCE SHALL BE PLACED IN THE BUILDING. THE MANUAL SHALL INCLUDE ALL OF THE ITEMS LISTED ON THE CALIFORNIA GREEN BUILDING STANDARDS CODE SECTION 4.410.1 [CGBC 4.410]

BMP- STORMWATER BEST MANAGEMENT PRACTICES

- 1.0 DETAILED INFORMATION RELATING TO THE BEST MANAGEMENT PRACTICES SPECIFIED BELOW AND ELSEWHERE WITHIN THIS DOCUMENT CAN BE FOUND IN THE CALIFORNIA STORMWATER BMP HANDBOOK; AVAILABLE FOR DOWNLOAD AT [WWW.CABMP.COM/HANDBOOK.HTM](http://www.cabmp.com/handbook.htm) & <http://www.doi.ca.gov/10/cons/cons/stormwater/manuals.htm>
- 2.0 GENERAL CONTRACTORS/CONTRACTORS AS APPLICABLE ARE RESPONSIBLE FOR THE TRAINING OF PERSONNEL IN THE PROPER DISPOSITION OF CONSTRUCTION WASTE & IMPLEMENTATION OF BMPs
- 3.0 ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
- 4.0 STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
- 5.0 FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- 6.0 EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS MUST BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS A SOLID WASTE.
- 7.0 TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- 8.0 SEDIMENTS AND OTHER MATERIAL MAY NOT BE TRACED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEEPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- 9.0 ANY SLOPES WITH DISTURBED SOILS OR DEMANDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER
- 10.0 PRESERVE EXISTING VEGETATION AT AREAS ON THE SITE WHERE NO CONSTRUCTION ACTIVITY IS PLANNED OR WILL OCCUR AT A LATER DATE
- 11.0 WATER USED DURING CONSTRUCTION ACTIVITIES IS TO BE USED IN A MANNER THAT AVOIDS CAUSING EROSION AND/OR THAT TRANSPORTS POLLUTANTS OFF SITE
- 12.0 DO NOT CLEAN, FUEL, OR MAINTAIN VEHICLES ON-SITE, EXCEPT IN DESIGNATED AREA WHERE WASH WATER IS CONTAINED & TREATED

SI- SPECIAL INSPECTIONS & STRUCTURAL OBSERVATIONS

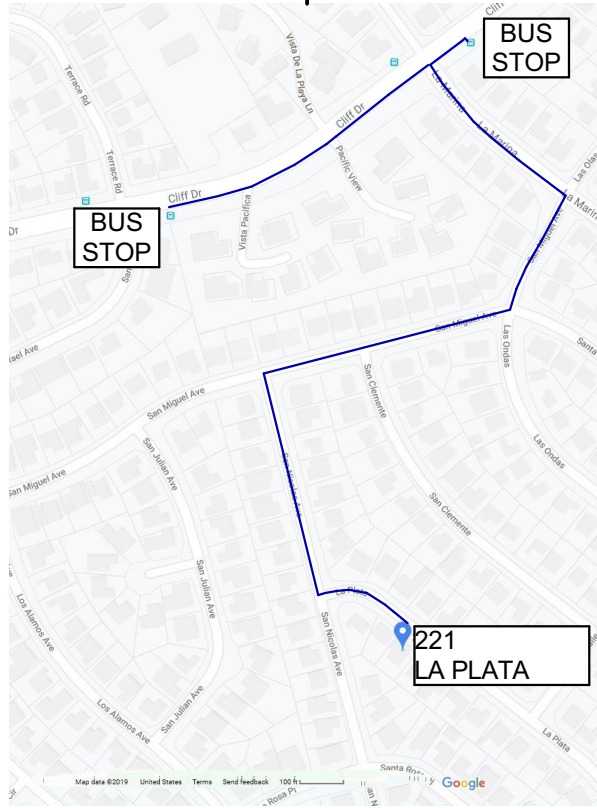
- 1.0 ALL SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE CALIFORNIA BUILDING CODE
- 2.0 CONTRACTOR TO OBTAIN APPROPRIATE SPECIAL INSPECTION/OBSERVATION REPORT DOCUMENTATION PRIOR TO REQUESTING AN INSPECTION BY THE LOCAL BUILDING AUTHORITY
- 3.0 WINDWARD TO OBSERVE REINFORCEMENT STEEL PRIOR TO CONCRETE PLACEMENT
- 4.0 WINDWARD TO OBSERVE FRAMING & SHEAR WALL NAILING AFTER PLUMBING, MECHANICAL & ELECTRICAL ROUGH-IN WORK HAS BEEN COMPLETED
- 5.0 CALL 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS

SPECIAL INSPECTION AGENCIES

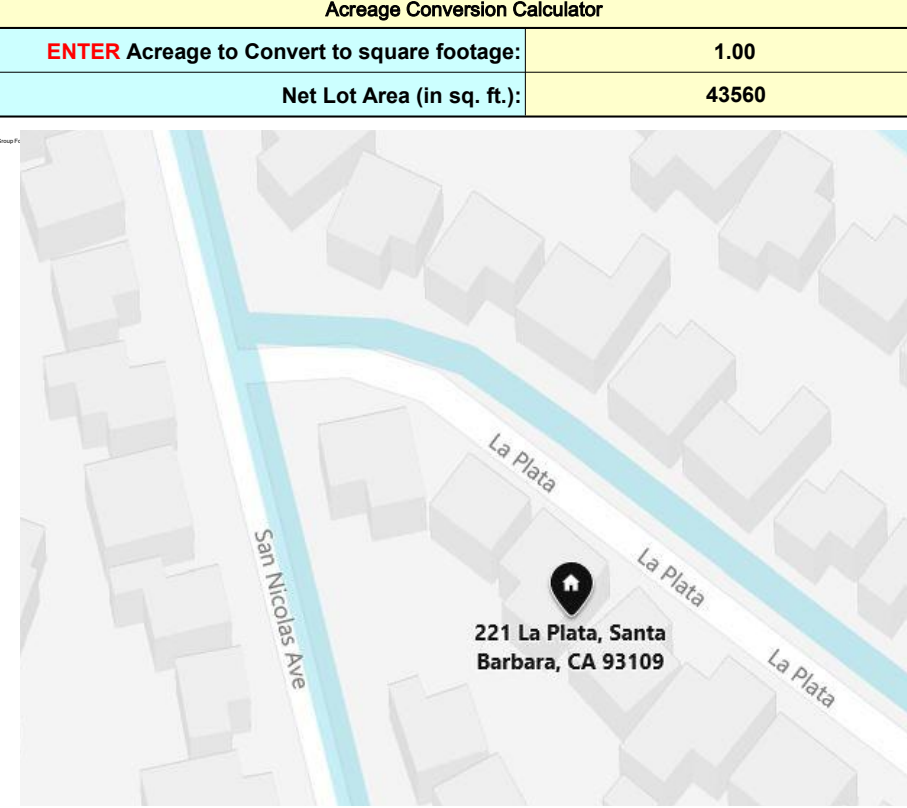
PACIFIC MATERIALS LABORATORIES
35 SOUTH LA PLATERA LANE
GOLETA, CALIFORNIA 93117
TEL: 805.964.6901
FAX: 805.964.6239



(E) 6' FENCE



BUS STOP LOCATION



VICINITY MAP

PROJECT DATA

SCOPE OF WORK -
NEW ACCESSORY DWELLING UNIT TO REPLACE EXISTING CARPORT.
(E) FENCE AT EASTERN PROPERTY LINE TO REMAIN - UNDER A SEPARATE PERMIT
REMOVAL OF SECOND APRON & (N) CITY COMPLIANT CURB - UNDER A SEPARATE PERMIT
DEMOLITION OF THE AS-BUILT DRIVEWAY GATE
INSTALLATION OF NEW SIX PHOTOVOLTAIC SOLAR PANELS AND PROVIDE FOR FUTURE EV CHARGING STATION
REMOVAL OF THREE PALM TREES IN THE REAR YARD
INSTALLATION OF A NEW AIR CONDITIONING UNIT, TO SERVE THE ACCESSORY DWELLING UNIT
SEWER LATERAL TO BE REPLACED - UNDER SEPARATE PERMIT

LOCATION: 221 LA PLATA

APN: 045-201-003

JURISDICTION: CITY OF SANTA BARBARA

OCCUPANCY CLASSIFICATION (E): RS-6 (R1)

LAND USE ZONE DISTRICT: E-3SD-3

OCCUPANCY CLASSIFICATION (P): RS-6 (R1)

LOT SIZE: 6,000 SQ FT

CONSTRUCTION TYPE: V-B

AVERAGE SLOPE OF PROPERTY: 5 %

FLOOD ZONE: NO

STORIES: 1

HIGH FIRE HAZARD AREA: NO

HEIGHT: 15'

SPINKLERS: NO

PARKING SPACES:	EXISTING	PROPOSED	
PRIMARY RESIDENCE	(E) 1 COVERED CARPORT	2 UNCOVERED (TANDEM PARKING)	2 UNCOVERED SPACES ARE ALLOWABLE UNDER GOVERNMENT CODE SECTION 65852.2
ADU/ JADU	N/A	0 COVERED 0 UNCOVERED	
TOTAL PROPOSED PARKING SPACES		2 PROPOSED UNCOVERED	

NOTE: PROPERTY IS LOCATED WITHIN 0.5 MILES WALKING DISTANCE TO TWO SBMTD BUS STATIONS ON CLIFF DRIVE. SEE VICINITY MAP AND BUS STOP LOCATION BELOW.

PROPOSED GRADING:	CUT	FILL
OUTSIDE MAIN BLDG FOOTPRINT	0 CU. YD	0 CU. YD
UNDER MAIN BLDG FOOTPRINT	0 CU. YD	0 CU. YD
TOTAL	0 CU. YD	0 CU. YD

PROJECT STATISTICS-

STATUS	TYPE	LEVEL	DESCRIPTION	NET SF	GROSS SF
Existing	HABITABLE	1ST-FLR	(E) ONE-STORY PRIMARY RESIDENTIAL UNIT (OWNER'S UNIT)	1,449	1,512
				1,449 sq ft	1,512 sq ft
New	HABITABLE	1ST-FLR	(P) ACCESSORY DWELLING UNIT	331	381
	NON-HABITABLE	1ST-FLR	(P) ACCESSORY DWELLING UNIT STORAGE	74	74
				405 sq ft	455 sq ft
To Be Demolished	NON-HABITABLE	1ST-FLR	(D) CARPORT	300	300
				300 sq ft	300 sq ft
				2,154 sq ft	2,267 sq ft

PROJECT DESIGN TEAM

CLIENT:
DAVID MARCHETTI
221 LA PLATA
SANTA BARBARA, CA 93109
EMAIL: DAVIDMARCHETTIREALTY@GMAIL.COM

DESIGN & ENGINEERING:
WINDWARD DESIGN SERVICES, LLC
1825 STATE STREET SUITE 102
SANTA BARBARA, CA 93101
TEL: 805.845.6601
EMAIL: KEN@WINDWARDENG.COM

F.A.R. Calculator

Instructions: Enter the information in the white boxes below. The spreadsheet will calculate the proposed FAR (Floor area ratio), the 100% max FAR (per the Zoning Ordinance), and the 85% max FAR (per the Zoning Ordinance). Additionally, it will determine whether a FAR Modification is required.

The Net Lot Area does not include any Public Road Easements or Public Road Right-of-Way areas. The proposed TOTAL Net FAR Floor Area that includes the net floor area of all stories of all buildings, but may or may not include basement/cellar floor area. FAR further clarification on these definitions please refer to SBMC §28.15.083.

ENTER Project Address:	221 LA PLATA
Is there a basement or cellar existing or proposed?	No
ENTER Proposed TOTAL Net FAR Floor Area (in sq. ft.):	1,854
ENTER Zone ONLY from drop-down list:	E-3
ENTER Net Lot Area (in sq. ft.):	6,000
Is the height of existing or proposed buildings 17 feet or greater?	No
Are existing or proposed buildings two stories or greater?	No
The FAR Requirements are:	GUIDELINE**

ENTER Average Slope of Lot:	5.00%
Does the height of existing or proposed buildings exceed 25 feet?	No
Is the site in the Hillside Design District?	No
Does the project include 500 or more cu. yds. of grading outside the main building footprint?	No
An FAR MOD is not required per SBMC §28.15.	

FLOOR AREA RATIO (FAR):	0.309
Lot Size Range:	4,000 - 9,999 sq.ft.
MAX FAR Calculation (in sq. ft.):	1,200 + (0.25 x lot size in sq.ft.)
100% MAX FAR:	0.450
100% MAX FAR (in sq. ft.):	2,700
85% of MAX FAR (in sq. ft.):	2,295
80% of MAX FAR (in sq. ft.):	2,160
The 1854 square foot proposed total is 68% of the MAX FAR.*	

* NOTE: Percentage total is rounded up.
**NOTE: If your project is located on a site with multiple or overlay zones, please contact Planning Staff to confirm whether the FAR limitations are "Required" or "Guideline".

Acreage Conversion Calculator	
ENTER Acreage to Convert to square footage:	1.00
Net Lot Area (in sq. ft.):	43560

WINDWARD
design services, llc
moving forward

1825 STATE STREET STE 102
SANTA BARBARA, CA 93101
T: 805.845.6601
E: INFO@WINDWARDENG.COM

PROJECT

MARCHETTI ADU
221 LA PLATA
SANTA BARBARA, CA 93109

CLIENT

DAVID MARCHETTI
221 LA PLATA
SANTA BARBARA, CA 93109

SHEET INDEX

G-001	GENERAL AND SITE PLAN
G-002	ENERGY ANALYSIS
G-003	ENERGY ANALYSIS
G-004	GREEN CODE
G-005	GENERAL NOTES
A-101	PLAN ELEV SECT
A-601	SCHEDULES
S-001	GENERAL
S-101	FOUNDATION/1ST STORY FRAMING PLAN
S-501	CONCRETE DETAILS
S-502	CONCRETE DETAILS
S-503	FRAMING DETAILS
S-504	FRAMING DETAILS
S-505	FRAMING DETAILS
S-506	SW & SHEATHING DETAILS
P-101	PLUMBING PLAN
M-101	MECH PLAN

DATE: 4/9/2020

DATES

1/3/2020 INITIAL
03/03/2020 (E) FENCE SUBMITTAL
03/03/2020 DART RESUBMITTAL
03/18/2020 RESUBMITTAL

SCALE AS NOTED

CREATED BY: WDS

SHEET

GENERAL AND SITE PLAN

G-001

GENERAL INFORMATION											
01	Project Name		Marchetti ADU								
02	Run Title		Title 24 Analysis								
03	Project Location		211 La Plata								
04	City		Santa Barbara		05	Standards Version		2019			
06	Zip code		93109		07	Software Version		EnergyPro 8.0			
08	Climate Zone		6		09	Front Orientation (deg/ Cardinal)		225			
10	Building Type		SingleFamily		11	Number of Dwelling Units		1			
12	Project Scope		NewConstruction		13	Number of Bedrooms		1			
14	New Cond. Floor Area (ft²)		0		15	Number of Stories		1			
16	Existing Cond. Floor Area (ft²)		n/a		17	Fenestration Average U-factor		0.296			
18	Total Cond. Floor Area (ft²)		454		19	Glazing Percentage (%)		25.22%			
20	ADU Bedroom Count		0		21	ADU Conditioned Floor Area		0			

COMPLIANCE RESULTS											
01	Building Complies with Computer Performance										
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.										
03	This building incorporates one or more Special Features shown below										

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)
Front Wall	Living Room	R-19 Wall	225	Front	196	96	90
Left Wall	Living Room	R-19 Wall	315	Left	112	0	90
Right Wall	Living Room	R-19 Wall	135	Right	112	0	90
Left Wall 2	Bedroom	R-19 Wall	315	Left	104	0	90
Right Wall 2	Bedroom	R-19 Wall	135	Right	104	12.5	90
Rear Wall	Bedroom	R-19 Wall	45	Back	173	0	90

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Type	Azimuth	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Roof	Living Room	R-38 Roof No Attic	180	Back	185	6	1	0.1	0.85	No
Roof 2	Bedroom	R-38 Roof No Attic	180	Back	269	0	1	0.1	0.85	No

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Bifold Door	Window	Front Wall	Front	225			1	96	0.29	NFRC	0.21	NFRC	Bug Screen
W01	Window	Right Wall 2	Right	135			1	12.5	0.3	NFRC	0.23	NFRC	Bug Screen
Skylight	Skylight	Roof	Back	45			1	6	0.38	NFRC	0.25	NFRC	None

HVAC - HEATING UNIT TYPES				
01	02	03	04	05
Name	System Type	Number of Units	Heating Efficiency Type	Efficiency
Heating Component 1	Central gas furnace	1	AFUE	80

01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER	Efficiency SEER	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	No Cooling	1			Not Zonal	Single Speed	n/a

01	02	03	04	05	06	07	08	09	10	11	12
		Duct Ins. R-value	Duct Location		Surface Area		Bypass Duct	Duct Leakage	HERS Verification		
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Duct Leakage	HERS Verification	
Air Distribution System 1	Conditioned space-entirely	Non-Verified	R-6	R-6	Conditioned Zone	Conditioned Zone	n/a	n/a	Sealed and Tested	Air Distribution System 1-her-dist	

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct leakage target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-her-dist	Yes	5	Required	Not Required	Not Required	Credit not taken	Not Required	No

ENERGY DESIGN RATING				
		Energy Design Ratings		Compliance Margins
		Efficiency¹ (EDR)	Total² (EDR)	Efficiency³ (EDR)
Standard Design		53.7	23.8	
Proposed Design		53.5	22.2	0.2

RESULT: ³ COMPLIES

¹ Efficiency EDR includes improvements to the building envelope and more efficient equipment
² Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
³ Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 1.47 kWdc
- Proposed PV system downsized to 1.48 kWdc (a factor of 0.923) due to cap of 1 x proposed design electricity use

ENERGY USE SUMMARY				
Energy Use (KTDU/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	5.6	7.79	-2.19	-39.1
Space Cooling	18.9	21.23	-2.33	-12.3
IAQ Ventilation	3.69	3.69	0	0
Water Heating	39.47	34.32	5.15	13
Self Utilization Credit	n/a	0	0	n/a
Compliance Energy Total	67.66	67.03	0.63	0.9

01	02	03	04	05	06	07	08	09	10	11
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)
1.48	NA	Standard	Fixed (roof mount)	none	false	225	TiltDeg rees	18.43	4	99

01	02	03	04	05	06	07
Name	Zone	Area (ft2)	Perimeter (ft)	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab-on-Grade	Living Room	185	41	None	80%	No
Slab-on-Grade 2	Bedroom	269	45	None	80%	No

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-19 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19	None / None	0.074	Inside Finish: Gypsum Board Cavity / Frame: R-19 in S-1/2 in. (R-18) / 2x6 Exterior Finish: 3 Coat Stucco
R-38 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-38	None / None	0.03	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-38 / 2x12 Inside Finish: Gypsum Board
R-0 Wall	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board

01	02	03	04
Quality Insulation Installation (QI)	Quality Installation of Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Not Required	Not Required	Not Required	n/a

HVAC - FAN SYSTEMS			
01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	n/a

01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness (%)	HERS Verification
Sfam IAQVentRpt	28	0.25	Default	0	Yes

REQUIRED SPECIAL FEATURES
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.
<ul style="list-style-type: none">PV System: 1.48 kWdcNon-standard duct location (any location other than attic)

HERS FEATURE SUMMARY
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry
Building-level Verifications: <ul style="list-style-type: none">Indoor air quality ventilationKitchen range hood Cooling System Verifications: <ul style="list-style-type: none">None Heating System Verifications: <ul style="list-style-type: none">None HVAC Distribution System Verifications: <ul style="list-style-type: none">Duct leakage testingDucts located entirely in conditioned space confirmed by duct leakage testing Domestic Hot Water System Verifications: <ul style="list-style-type: none">None

BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Marchetti ADU	454	1	1	2	0	1



ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Heater Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
Living Room	Conditioned	HVAC System1	185	10	DHW Sys 1	N/A
Bedroom	Conditioned	HVAC System1	269	10	DHW Sys 1	N/A

WATER HEATING SYSTEMS						
01	02	03	04	05	06	07
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Fraction (%)	Compact Distribution	HERS Verification
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	0	None	n/a

01	02	03	04	05	06	07	08	09	10	11	12
Name	Heating Element Type	Tank Type	# Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff.	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model / Other	Tank Location or Ambient Condition
DHW Heater 1	Natural Gas	Consumer Instantaneous	1	0	0.96-UEF	200000-Btu/Hr	0	n/a	n/a	n/a	n/a

WATER HEATING - HERS VERIFICATION							
01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS								
01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Heating Equipment Count	Cooling Equipment Count
HVAC System1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	Setback	1	1

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I, <u>Ken Dickson</u> , certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Ken Dickson	Documentation Author Signature: 
Company: Windward Engineering	Signature Date: 2020-03-24 08:53:16
Address: 1825 State St	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Santa Barbara, CA 93101	Phone: 805-845-6601
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I, <u>Ken Dickson</u> , certify the following under penalty of perjury, under the laws of the State of California:	
<div><div>1.</div><div>I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.</div></div> <div><div>2.</div><div>I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.</div></div> <div><div>3.</div><div>The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.</div></div>	
Responsible Designer Name: Ken Dickson	Responsible Designer Signature: 
Company: Windward Engineering	Date Signed: 2020-03-24 08:53:16
Address: 1825 State St	License: 61155
City/State/Zip: Santa Barbara, CA 93101	Phone: 805-845-6601



2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply. (Original 08/2019)

Building Envelope Measures:	
\$ 110.6(a):	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 cm per square foot or less when tested per NFRC-600, ASTM E283 or AIAA/WMCA-1011, S-2044B-2011.
\$ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of Section 10.111(a).
\$ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6.A, 110.6.B, or JA4.5 for exterior doors. They must be caulked and/or weather stripped.
\$ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
\$ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
\$ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of Section 110.8(g).
\$ 110.8(h):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(h) and be labeled per § 10.113 when the installation of a cool roof is specified on the CFI-R.
\$ 110.8(i):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
\$ 150.0(a):	Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
\$ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
\$ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less, or R-19 in 2x6 inch U-factor of 0.074 or less). Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102, equivalent to an installed value of R-13 in a wood framed assembly. Masonry walls must meet Table 150.1.A or B.
\$ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.
\$ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings no greater than 0.3%, have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
\$ 150.0(g):	Vapor Retarder. In climate zones 1 through 16, the earth floor or unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
\$ 150.0(h):	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
\$ 150.0(i):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.
Fireplaces, Decorative Gas Appliances, and Gas Log Measures:	
\$ 110.5(a):	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
\$ 150.0(a):	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
\$ 150.0(a)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and light-fitting damper or combustion-air control device.
\$ 150.0(a)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.
Space Conditioning, Water Heating, and Plumbing System Measures:	
\$ 110.4 & 110.3:	Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the Energy Commission.
\$ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2.A through Table 110.2.K.
\$ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
\$ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
\$ 110.3(a):	Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(a).
\$ 110.3(c):	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
\$ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas, fan-type central furnaces, household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.
\$ 150.0(b):	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h).



2019 Low-Rise Residential Mandatory Measures Summary

\$ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least 5 feet from the outlet of any dryer vent.
\$ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
\$ 150.0(i):	Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
\$ 150.0(j)2A:	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of 1 inch or a minimum insulation R-value of 7.7: the first 5 feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than 1 inch; all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
\$ 150.0(j)3:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water resistant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
\$ 150.0(j)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 10/2-40 volt 3 conductor, 10 AWG copper branch circuit, within 3 feet from the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
\$ 150.0(j)2:	Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
\$ 150.0(j)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
\$ 110.8(d):	Ducts. Insulation installed on an existing space-conditioning duct must comply with California Mechanical Code (CMC) Section 604.0. If a contractor installs the insulation, the contractor must certify to the customer in writing, that the insulation meets this requirement.
\$ 150.0(m):	CMC Compliance. All air distribution system ducts and plenums must meet the requirements of the CMC Section 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA 006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1 & 3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and other mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.
\$ 150.0(m)1:	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures. Joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
\$ 150.0(m)2:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
\$ 150.0(m)3:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
\$ 150.0(m)7:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
\$ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water resistant and provides shielding from solar radiation.
\$ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier.
\$ 150.0(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
\$ 150.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a 2 inch depth or can be 1 inch if sized per Equation 150.0.A. Pressure drops and labeling must meet the requirements in § 150.0(m)12. Filters must be accessible for regular service.*
\$ 150.0(m)13:	Space Conditioning System Airflow Rate and Fan Efficiency. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.50 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*



2019 Low-Rise Residential Mandatory Measures Summary

Requirements for Ventilation and Indoor Air Quality:	
\$ 150.0(a):	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(a).
\$ 150.0(a)1C:	Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(a)1C.
\$ 150.0(a)1E:	Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
\$ 150.0(a)1F:	Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20% of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
\$ 150.0(a)1G:	Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
\$ 150.0(a)2:	Field Verification and Diagnostic Testing. Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. Kitchen range hoods must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa Systems and Equipment Measures:	
\$ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent waterproof plate or card with operating instructions; and must not use electric resistance heating.*
\$ 110.4(b):	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
\$ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
\$ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
\$ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
\$ 150.0(a):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.
Lighting Measures:	
\$ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.
\$ 150.0(a)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.
\$ 150.0(a)1B:	Blank Electrical Boxes. The number of electrical boxes that are more than 5 feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
\$ 150.0(a)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(a)1C.
\$ 150.0(a)1D:	Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
\$ 150.0(a)1E:	Night Lights, Sleep Lights, and Path Lights. Night lights, sleep lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
\$ 150.0(a)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).
\$ 150.0(a)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference, Joint Appendix JA8.
\$ 150.0(a)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
\$ 150.0(a)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinets or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
\$ 150.0(a)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
\$ 150.0(a)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.*
\$ 150.0(a)2C:	Interior Switches and Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
\$ 150.0(a)2D:	Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.
\$ 150.0(a)2E:	Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
\$ 150.0(a)2F:	Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.9.



2019 Low-Rise Residential Mandatory Measures Summary

\$ 150.0(a)2G:	Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(c); and meets all other requirements in § 150.0(a)2.
\$ 150.0(a)2H:	Interior Switches and Controls. A multicore programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(a)2.
\$ 150.0(a)2I:	Interior Switches and Controls. In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic off functionality. If an occupant sensor is installed, it must be initially configured to manual on operation using the manual control required under Section 150.0(a)2C.
\$ 150.0(a)2J:	Interior Switches and Controls. Luminaires that are or contain light sources that meet Reference, Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.*
\$ 150.0(a)2K:	Interior Switches and Controls. Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
\$ 150.0(a)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in Item § 150.0(a)3A (ON and OFF switch) and the requirements in either § 150.0(a)3AII (photocell) and either a motion sensor or automatic time switch control) or § 150.0(a)3AIII (astronomical time clock), or an EMCS.
\$ 150.0(a)3B:	Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches, and residential parking lots and carports with less than eight vehicles per site must comply with either Section 150.0(a)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
\$ 150.0(a)3C:	Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by Section 150.0(a)3B or Section 150.0(a)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
\$ 150.0(a)4:	Internally Illuminated Address Signs. Internally illuminated address signs must comply with § 140.8 or must consume no more than 5 watts of power as determined according to § 130.0(c).
\$ 150.0(a)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for non-residential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
\$ 150.0(a)6A:	Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
\$ 150.0(a)6B:	Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buildings:	
\$ 110.10(a)1:	Single Family Residences. Single family residences located in subdivisions with ten or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(a) through § 110.10(c).
\$ 110.10(a)2:	Low-rise Multifamily Buildings. Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
\$ 110.10(b)1:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.
\$ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
\$ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*
\$ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
\$ 110.10(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
\$ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
\$ 110.10(d):	Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
\$ 110.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
\$ 110.10(e)2:	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

PROJECT

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CLIENT

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SHEET INDEX

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DATE: 4/9/2020

DATES

1/3/2020	INITIAL
03/03/2020	(E) FENCE SUBMITTAL
03/03/2020	DART RESUBMITTAL
03/18/2020	RESUBMITTAL

SCALE AS NOTED

CREATED BY: WDS

SHEET

ENERGY ANALYSIS

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 1101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.
Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

ABBREVIATION DEFINITIONS:

HCD Department of Housing and Community Development
BSC California Building Standards Commission
DSA-SS Division of the State Architect, Structural Safety
OSHPD Office of Statewide Health Planning and Development
LR Low Rise
HR High Rise
AA Additions and Alterations
N New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

DIVISION 4.1 PLANNING AND DESIGN

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLIES. Wattlies are used to reduce sediment in runoff. Wattlies are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downdrow slope. Wattlies are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of stem, water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage stem, water drainage during construction. In order to manage stem, water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

- Retention basins of sufficient size shall be utilized to retain stem, water on the site.
- Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattlie or other method approved by the enforcing agency
- Compliance with a lawfully enacted storm water management ordinance.

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

- Swales
- Water collection and disposal systems
- French drains
- Water retention gardens
- Other water measures which keep surface water away from buildings and aid in groundwater recharge. Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 and 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625.

Exceptions: On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
1. Where there is no commercial power supply.
2. Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or developer by more than \$400.00 per unit.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings. Where 17 or more multifamily dwelling units are constructed on a building site, 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging stations (EV spaces) capable of supporting future EVSE. Calculations for the number of EV spaces shall be rounded up to the nearest whole number.

Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. At least one EV space shall be located in common use areas and available for use by all residents.
When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:

- The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.
- The EV space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following:

- The minimum length of each EV space shall be 18 feet (5486 mm).
- The minimum width of each EV space shall be 9 feet (2743 mm).
- One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 2 feet (605 mm).
- Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV spaces. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. Notes:

- The California Department of Transportation adopts and publishes the "California Manual on Uniform Traffic Control Devices (California MUTCD)" to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives Number 13-01. Website: www.dot.ca.gov/traffic/policy/13-01.pdf
- See Vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces.
- The Governor's Office of Planning and Research (OPR) published a "Zero-Emission Vehicle Community Readiness Guidebook" which provides helpful information for local governments, residents and businesses. Website: http://opr.ca.gov/docs/ZEV_Guidebook.pdf

DIVISION 4.2

4.201 GENERAL

ENERGY EFFICIENCY

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

- 4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush.

The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets In Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.25 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code.

NOTE:

THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS	2.0 GPM @ 80 PSI
(RESIDENTIAL)	
LAVATORY FAUCETS	MAX. 1.2 GPM @ 60 PSI
(RESIDENTIAL)	MIN. 0.8 GPM @20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.25 GAUCV/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE

4.304.1 IRRIGATION CONTROLLERS. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

- Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
- Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.
Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

DIVISION 4.4

EFFICIENCY

MATERIAL CONSERVATION AND RESOURCE

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.406 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.406.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

- Excavated soil and land-clearing debris.
- Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this Item do not exist or are not located reasonably close to the jobsite.
- The enforcing agency may make exceptions to the requirements of this section when isolated jobsite are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

- Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
- Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).

3. Identify diversion facilities where the construction and demolition waste material collected will be taken.

4. Identify construction methods employed to reduce the amount of construction and demolition waste material generated.

5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE (LRI). Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1.

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 lbs./sq.ft. of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1.

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)RM located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.

2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.

2. Operation and maintenance instructions for the following:

- Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
 - Roof and yard drainage, including gutters and downspouts.
 - Space conditioning systems, including condensers and air filters.
 - Landscape irrigation systems.
 - Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this California Green Building Standards Code.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 SCOPE

The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS

The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardwood, structural plywood, structural panels, structural lumber, oriented strand board, glued laminated timber, prefabricated wood joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g/100 ROG).

Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).
REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulk used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

- Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAMQD Rule 1168 where limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
- Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide voc standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21.4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

- Manufacturer's product specification.
- Field verification of on-site product containers.

TABLE 4.504.1 -ADHESIVE VOC LIMIT 1, 2

(Less Water and Less Exempt Compounds in Grams per Liter)
ARCHITECTURAL APPLICATIONS CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES 50

CARPET PAD ADHESIVES 150
OUTDOOR CARPET ADHESIVES 100
WOOD FLOORING ADHESIVES 100
RUBBER FLOOR ADHESIVES 60

SUBFLOOR ADHESIVES 65
CERAMIC TILE ADHESIVES 80
VCT & ASPHALT TILE ADHESIVES 50
DRYWALL & PANEL ADHESIVES 50

COVE BASE ADHESIVES 50
MULTIPURPOSE CONSTRUCTION ADHESIVE 70
STRUCTURAL GLAZING ADHESIVES 100

SINGLE-PLY ROOF MEMBRANE ADHESIVES 250
OTHER ADHESIVES NOT LISTED 50
SPECIALTY APPLICATIONS

PVC WELDING 510
CPVC WELDING 490
ABS WELDING 325
PLASTIC CEMENT WELDING 250

ADHESIVE PRIMER FOR PLASTIC 550
CONTACT ADHESIVE 80
SPECIAL PURPOSE CONTACT ADHESIVE 250
TRIM ADHESIVE 140

TOP & TRIM ADHESIVE 250
SUBSTRATE SPECIFIC APPLICATIONS

METAL TO METAL 30
PLASTIC FOAMS 50
POROUS MATERIAL (EXCEPT WOOD) 50
WOOD 30

FIBERGLASS 80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)
SEALANTS CURRENT VOC LIMIT
ARCHITECTURAL 250
MARINE DECK 760

NONMEMBRANE ROOF 300
ROADWAY 250
SINGLE-PLY ROOF MEMBRANE 450
OTHER

SEALANT PRIMERS
ARCHITECTURAL 250
NON-POROUS 775
MODIFIED BITUMINOUS 500
MARINE DECK 760
OTHER 750

TABLE 4.504.3-VOC CONTENT LIMITS FOR

ARCHITECTURAL COATINGS 2,3
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS
COATING CATEGORY CURRENT VOC LIMIT

FLAT COATINGS 50
NON-FLAT COATINGS 100
NON FLAT-HIGH GLOSS COATINGS 150

SPECIALTY COATINGS

ALUMINUM ROOF COATINGS 400
BASEMENT SPECIAL TY COATINGS 400
BITUMINOUS ROOF COATINGS 50
BITUMINOUS ROOF PRIMERS 350

WOOD BREAKERS 350
CONCRETE CURING COMPOUNDS 100
CONCRETE/MASONRY SEALERS 350
DRIVEWAY SEALERS 50

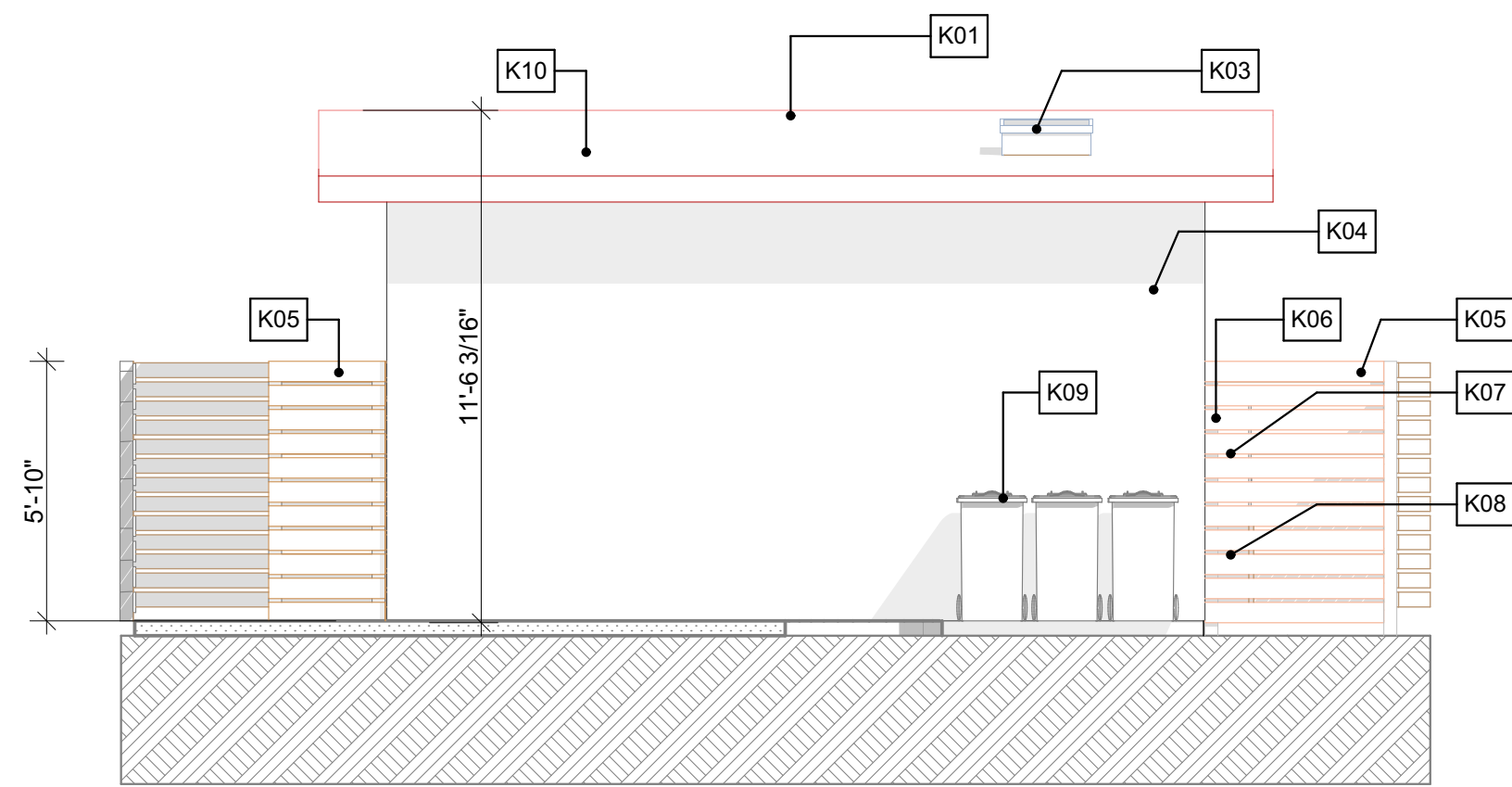
DRY FOG COATINGS 150
FAUX FINISHING COATINGS 350
FIRE RESISTIVE COATINGS 100
FLOOR COATINGS 350

FORM-RELEASE COMPOUNDS 250
GRAPHIC ARTS COATINGS (SIGN PAINTS) 500
HIGH TEMPERATURE COATINGS 420
INDUSTRIAL MAINTENANCE COATINGS 250

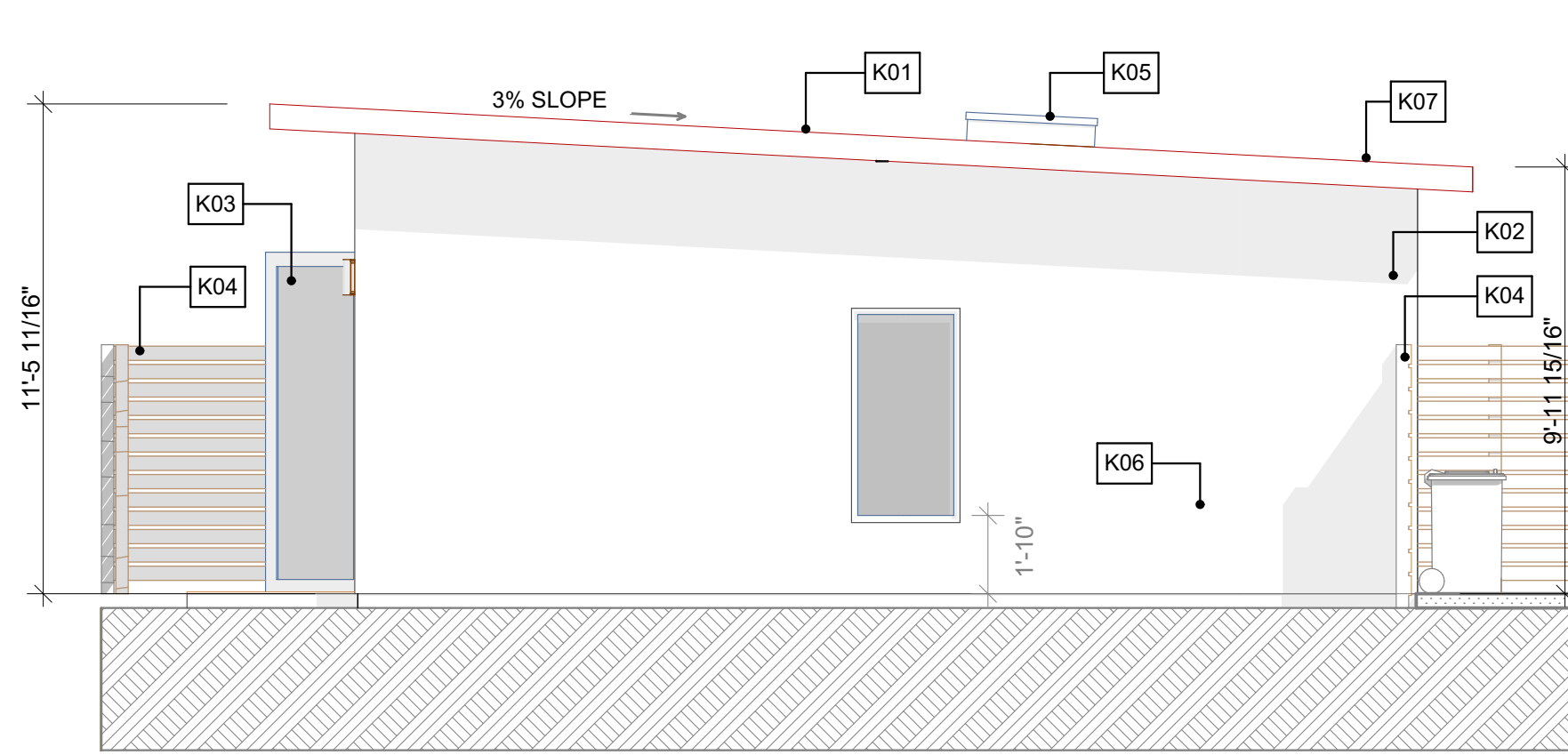
LOW SOLIDS COATINGS 120
MAGNETIC CEMENT COATINGS 450
MASTIC TEXTURE COATINGS 100
METALLIC PIGMENTED COATINGS 500

MULTICOLOR COATINGS 250
PRETREATMENT WASH PRIMERS 420
PRIMERS, SEALERS, & UNDERCOATERS 100
REACTIVE PENETRATING SEALERS 350

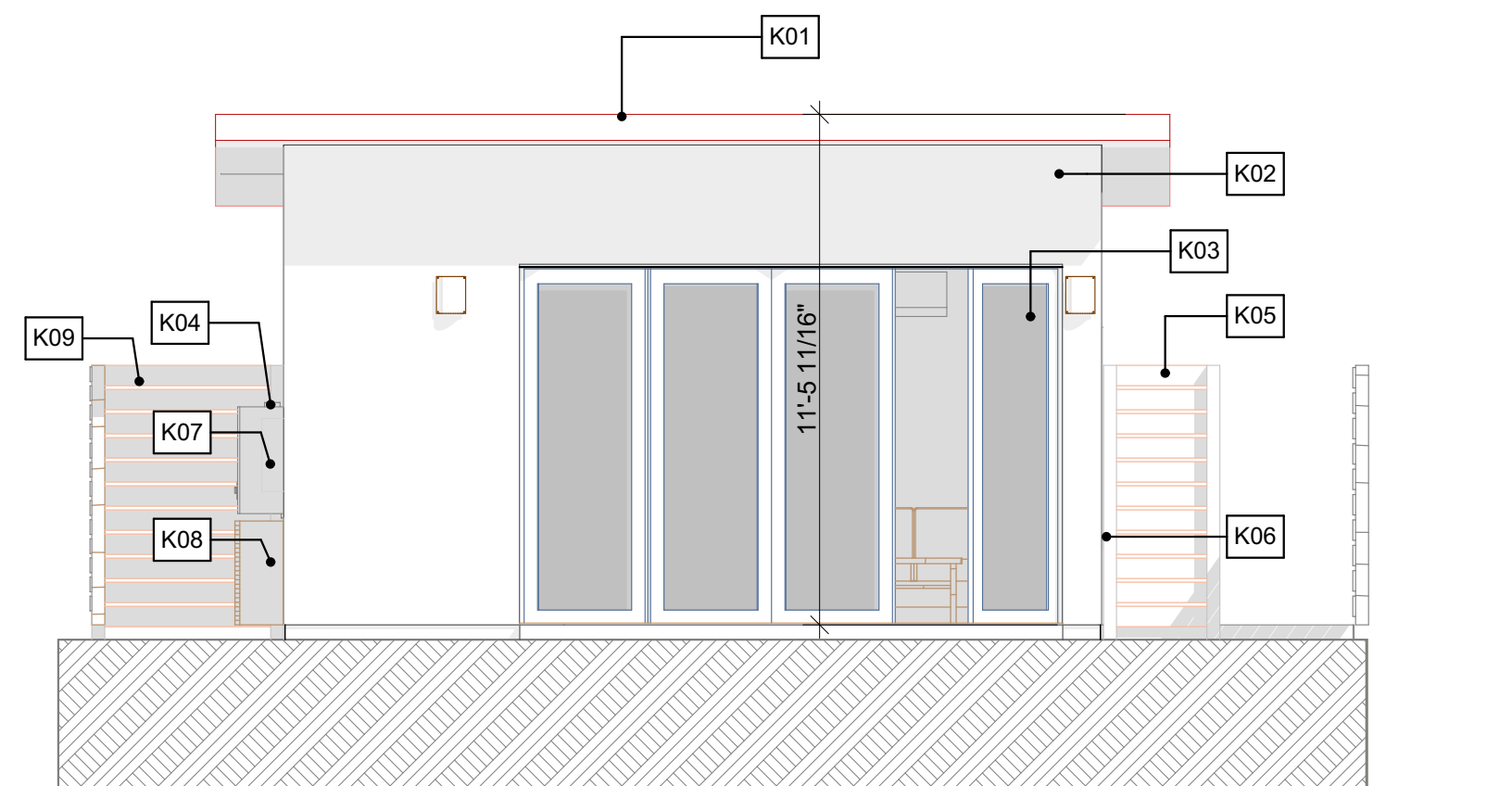
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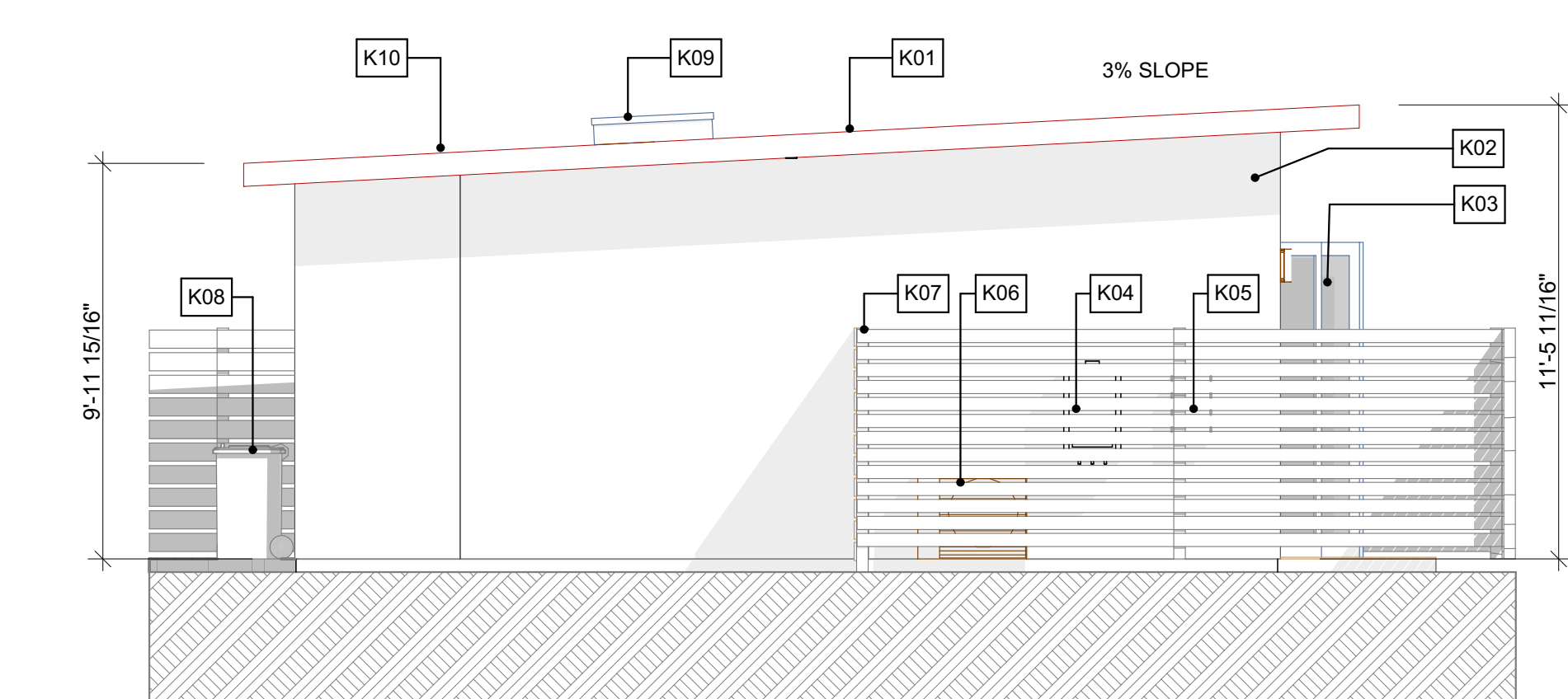
(P) ELEVATION NORTH
SCALE: 1/4" = 1'-0"



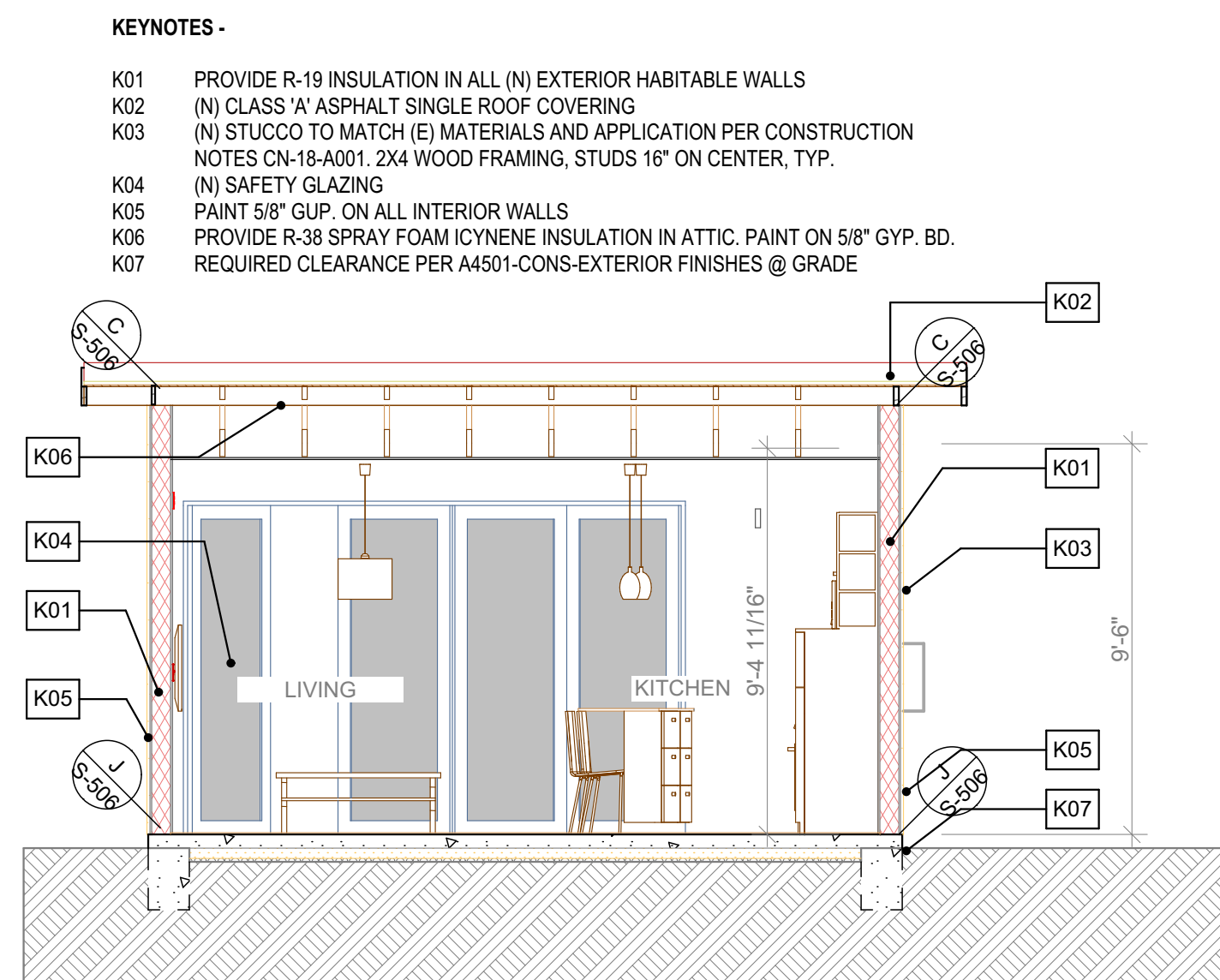
(P) ELEVATION EAST
SCALE: 1/4" = 1'-0"



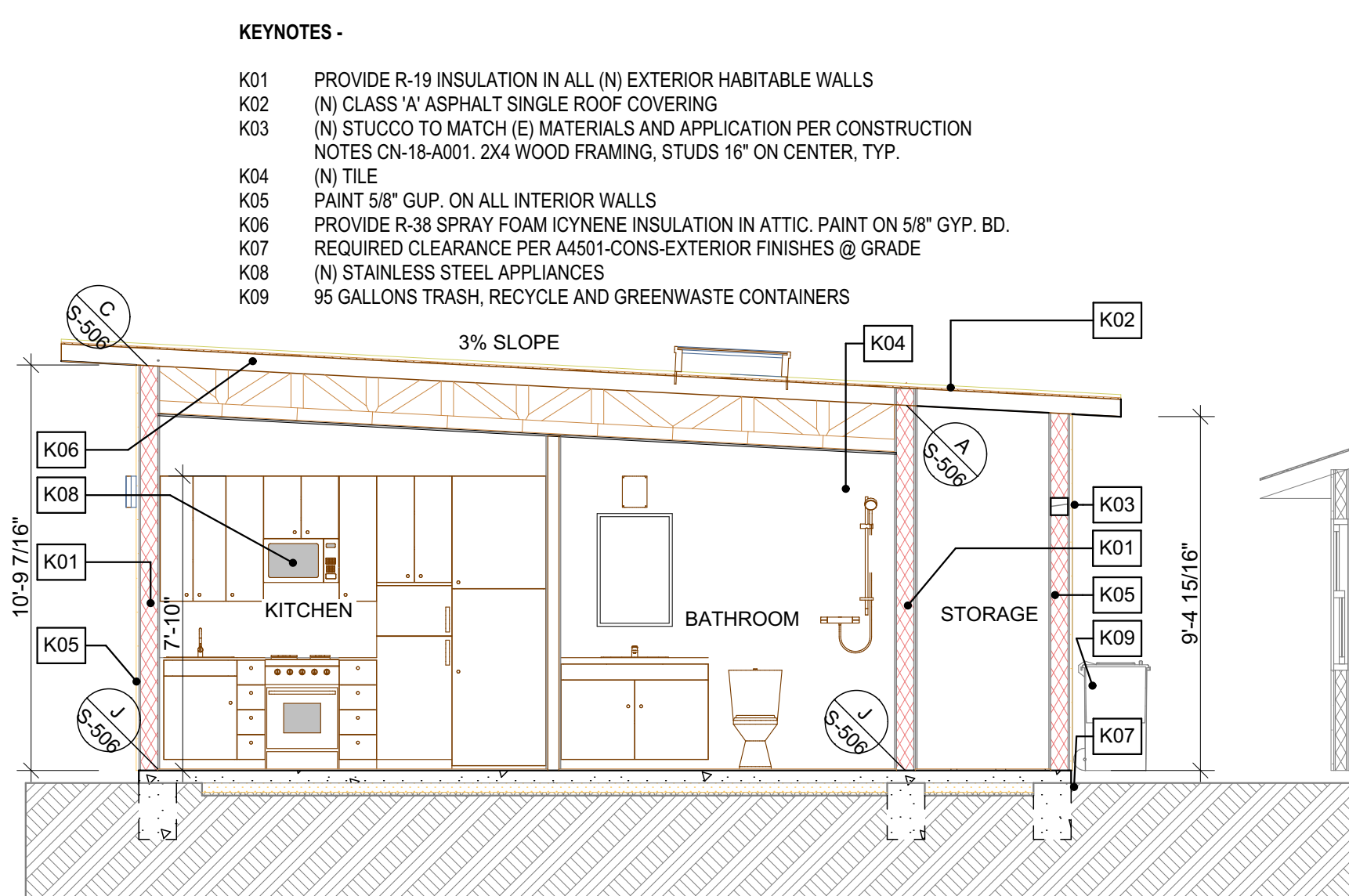
(P) ELEVATION SOUTH
SCALE: 1/4" = 1'-0"



(P) ELEVATION WEST
SCALE: 1/4" = 1'-0"

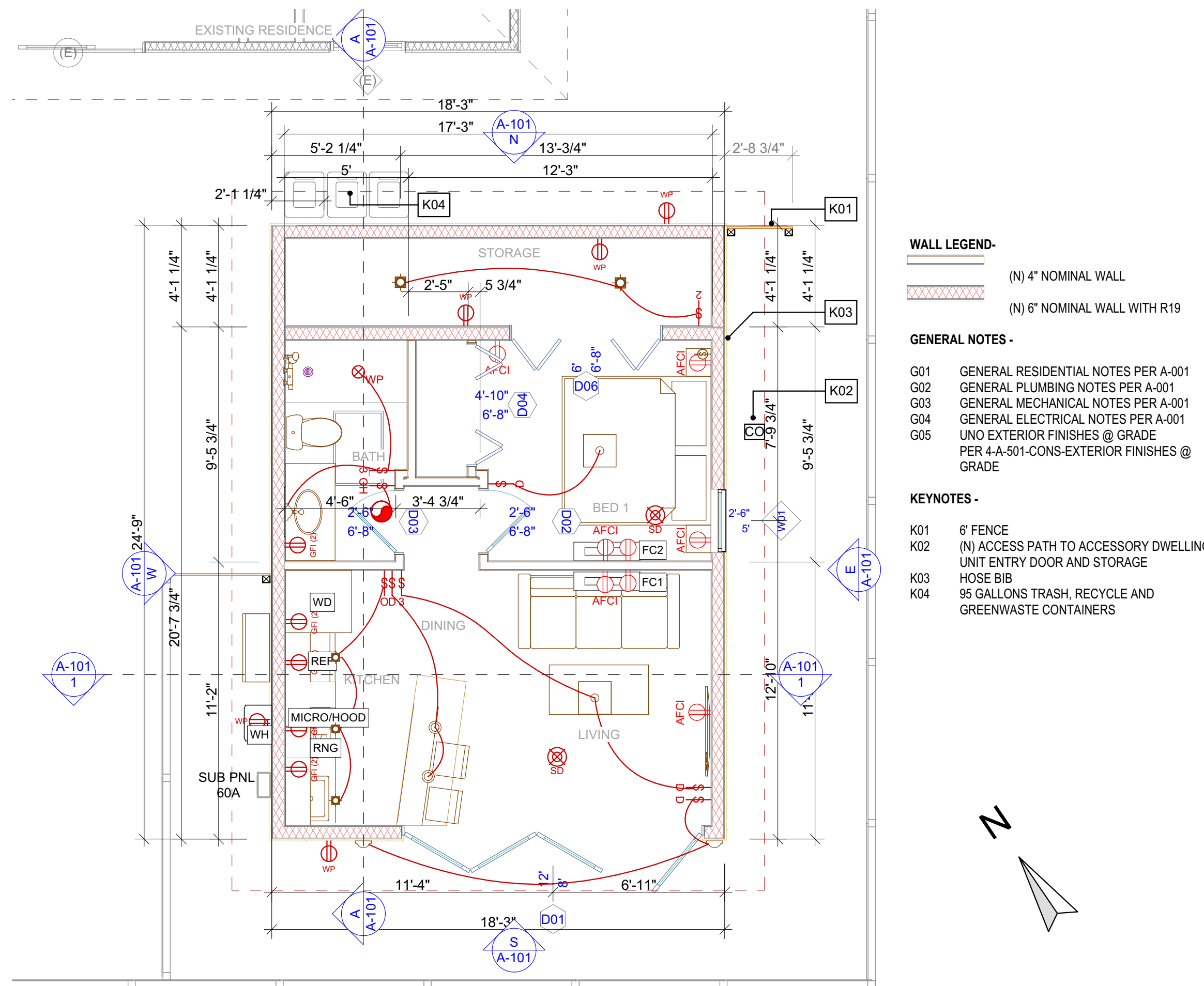


1 SECTION
SCALE: 1/4" = 1'-0"



A SECTION
SCALE: 1/4" = 1'-0"

ELECTRICAL LEGEND		
DESCRIPTION	SYMBOL	QTY
LIGHT SURFACE MOUNTED LED WP		3
PENDANT 1 LED		1
PENDANT 2 LED		1
PENDANT 3 LED		2
RECEPTACLE		2
RECEPTACLE AFCI		6
RECESS CAN LED LIGHT		5
SINGLE SWITCH OUTLET		1
SWITCH 2-WAY		1
SWITCH 3-WAY		2
SWITCH DIMMER		4



1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

DATE: 4/9/2020

DATES

1/3/2020 INITIAL
03/03/2020 (E) FENCE SUBMITTAL
03/03/2020 DART RESUBMITTAL
03/18/2020 RESUBMITTAL

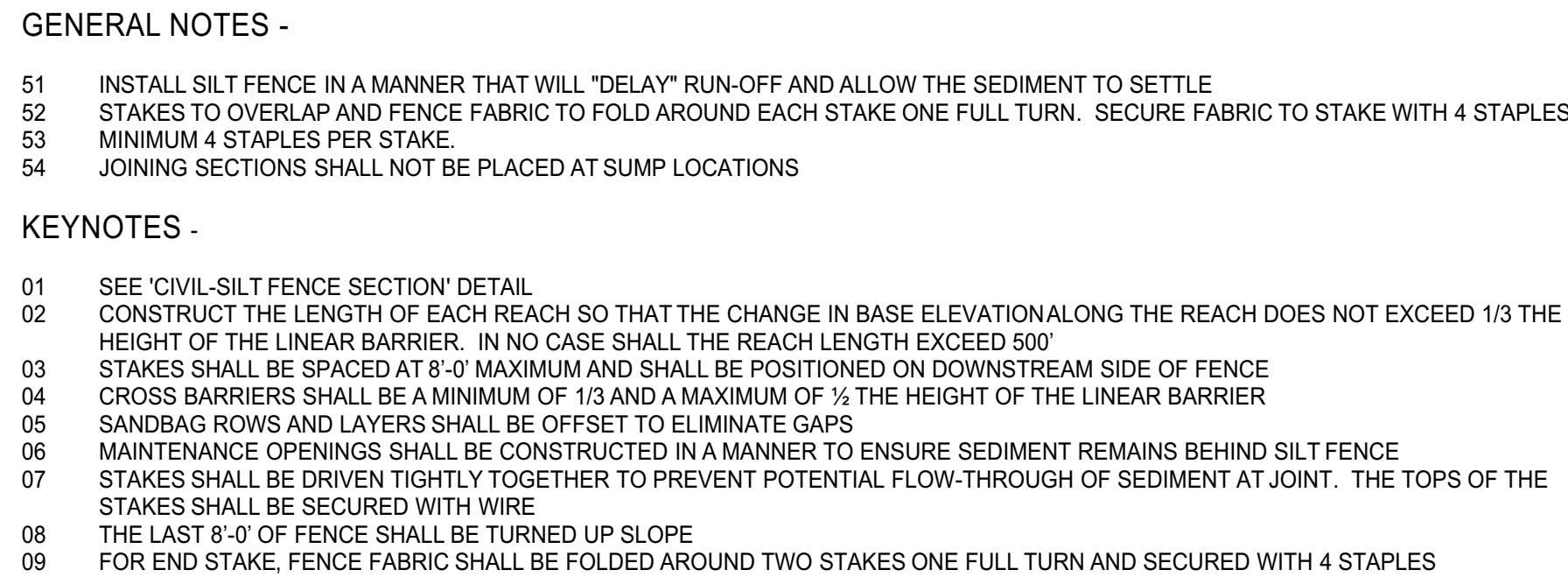
SCALE AS NOTED

CREATED BY: WDS

SHEET

PLAN ELEV SECT

A-101



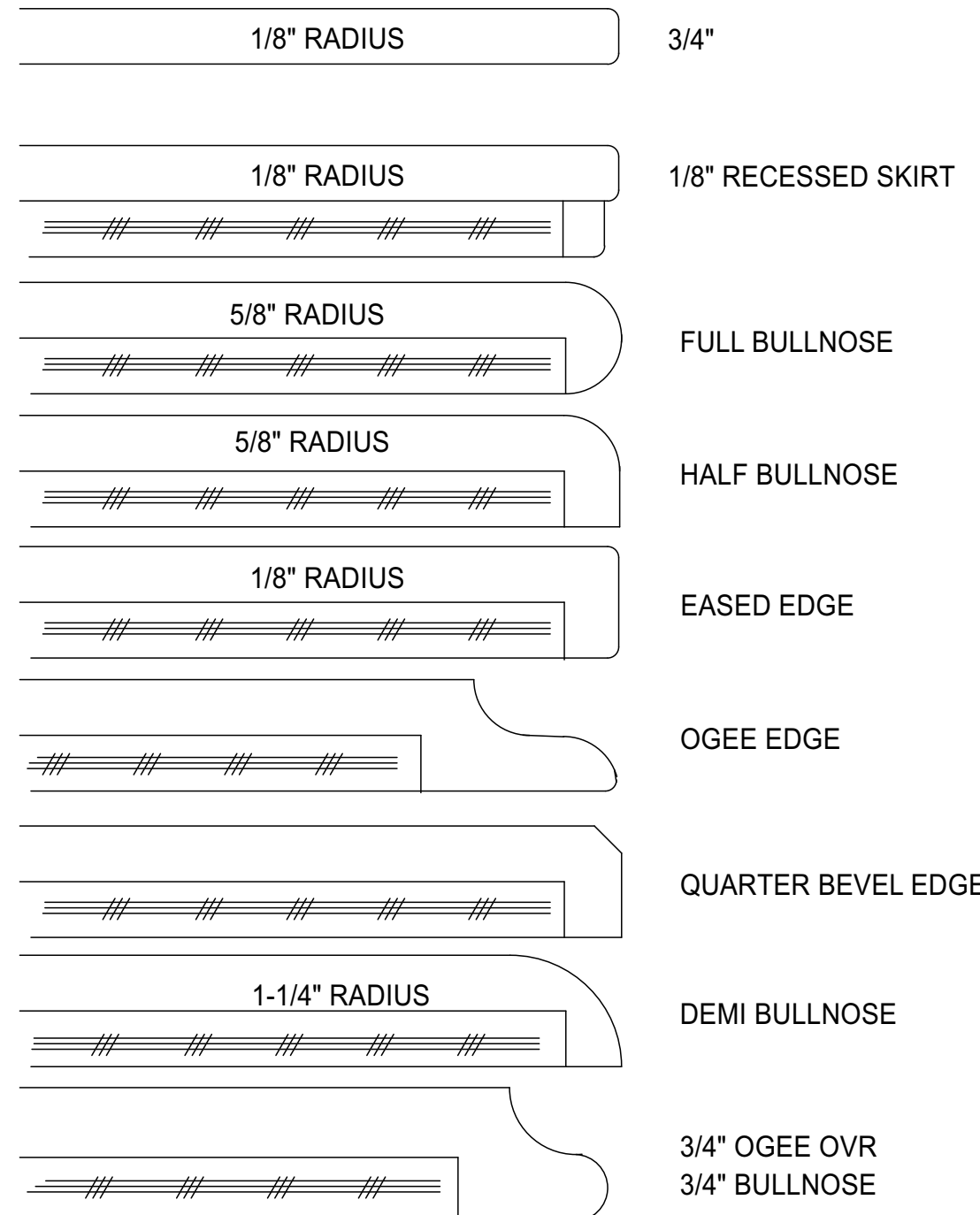
3 CIVIL-SILT FENCE SECTION
NOT TO SCALE

- 51 INSTALL SILT FENCE IN A MANNER THAT WILL "DELAY" RUN-OFF AND ALLOW THE
SEDIMENT TO SETTLE

- 01 2X2 (NOMINAL) STAKES TO BE PLACED NO MORE THAN 8-FT OC
02 SILT FENCE FABRIC TO BE BURIED IN 6" X 6" TRENCH AS INDICATED. TAMPA
BACKFILLED SOIL

- 51 UNLESS NOTED OTHERWISE, ALL MATERIALS TO BE INSTALLED PER THE APPLICABLE PROVISIONS OF THESE
DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
52 5% MIN SLOPE OF GRADE FOR AT LEAST 10-FT AWAY FROM FOUNDATION. 2% FOR IMPERVIOUS SURFACES

- | | |
|----|--|
| 01 | WATER-RESISTIVE BARRIER PER ARCHITECTURAL SPECIFICATIONS |
| 02 | 6" MIN CLR BETWEEN WOOD SIDING & GRADE. CLEARANCE MAY BE REDUCED IF SIDING, SHEATHING, & |
| 03 | LUMBER IS NATURALLY RESISTANT TO DECAY OR TREATED WITH PRESERVATIVE |
| 04 | A CORROSION RESISTANT WEEP SCREED, MADE FROM MIN 26 GA METAL, WITH MIN 3/16" FLANGE, SHALL |
| 05 | BE INSTALL AT BASE OF STUCCO. WEEP SCREED SHALL HAVE A MIN CLR TO GRADE OF 4" OR A 2" MIN CLR TO |
| 06 | PAVING |
| 07 | MASONRY VENEER. INSTALL PER MFG INSTRUCTIONS |
| 08 | SELF-ADHERING FLASHING WITH 4" MIN LAP OF FOUNDATION AND 6" MIN LAP UP WALL SHEATHING |
| 09 | WEEP SCREED |
| 10 | GALVANIZED SHEET METAL FLASHING, MIN 24 GA, WITH MIN 3" FLANGE. UNO, SOLDER ALL JOINTS |
| 11 | BEDDING SEAL |
| 12 | 2-LAYERS OF GRADE D WATER-RESISTIVE BARRIER PER ARCHITECTURAL SPECIFICATIONS |



- | | |
|-----|---|
| G01 | TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED MIN 50 FT FROM STORMDRAIN INLETS, OPEN DRAINAGE FACILITIES, & WATERCOURSES; IF DEEMED INFEASIBLE, INLETS SHALL BE PROTECTED WITH SILT FENCE OR OTHER APPROVED METHOD |
| G02 | CONCRETE WASTE SHALL NOT BE ALLOWED TO ENTER STORM DRAINS OR WATERCOURSES |
| G03 | DO NOT ALLOW SAW-CUT CONCRETE SLURRY TO ENTER STORM DRAINS OR WATERCOURSES |
| G04 | HARDENED CONCRETE WASTE TO BE COLLECTED & PROPERLY DISPOSED OF. |

- K01 SANDBAG
K02 10 MIL PLASTIC LINING, SOIL BASE SHALL BE FREE OF ROCKS OR DEBRIS THAT MAY
COMPROMISE THE IMPERMEABILITY OF THE MATERIAL
K03 PERIMETER BOARDS & STAKES
K04 LOW STAKED SILT FENCE ON 3 SIDES
K05 BELOW GRADE WASHOUT SIZED TO PROVIDE A MIN FREEBOARD OF 12"
K06 ABOVE GRADE WASHOUT SIZED TO PROVIDE A MIN FREEBOARD OF 4"

8 CIVIL-DOWNSPOUT @ CATCHBASIN
NOT TO SCALE

MATERIALS & EQUIPMENT SCHEDULE DESCRIPTIONS					
ID	TYPE	DESCRIPTION	MFG	PART #	NOTES
B1	BASEBOARD	WOOD, 1X6, STAIN GRADE		TBD	
B2	BASEBOARD	TILE			
CB1	CABINETS	VANITY			
CB2	CABINETS	VANITY, 30"			
CB3	CABINETS	FULL-HEIGHT & DESK			
CB4	CABINETS	MULTIMEDIA & STORAGE			
CB5	CABINETS	KITCHEN			
CB6	CABINETS	LAUNDRY LOWER & UPPIERS			
CL1	CEILING TYPE	5/8" GYPSUM, CATS PAW FINISH, SQUARE CORNERS			
CS1	CASING	INTERIOR DOOR & WINDOW TRIM		TBD	
CT1	COUNTERTOP	GRANITE SLAB W/ONE ROW OF BACKSPLASH TILE		TBD	
CT2	COUNTERTOP	GRANITE SLAB W/ONE ROW OF BACKSPLASH TILE		TBD	
CT3	COUNTERTOP	GRANITE SLAB W/BACKSPLASH TILE TO UNDERSIDE OF CABINETS & BEHIND RANGE		TBD	
CT4	COUNTERTOP	GRANITE SLAB AT KITCHEN ISLAND		TBD	
CT5	COUNTERTOP	GRANITE SLAB AT BATHROOM		TBD	
EF1	EXTERIOR FINISH	(E) BOARD AND BATTEN			
EF2	EXTERIOR FINISH	STONE/VENEER WAINSCOT	ELDORADO STONE	SANTA BARBARA	
ET1	EXTERIOR TRIM	(E) 1X4			
F1	FASCIA	NONE			
FL1	FLOORING	ENGINEERED WOOD		TBD	
FL2	FLOORING	TILE		TBD	
FL3	FLOORING	POLISHED CONCRETE			
G1	GUTTER	(E) COPPER, 4" HALF-ROUND, 3" ROUND DOWNSPOUTS			
P1	PAINT	PAINT, INTERIOR, FLAT, TYPICAL WALL AREAS	ICI PAINTS	TBD	
P2	PAINT	PAINT, INTERIOR, SATIN, KITCHEN AND BATH WALLS	ICI PAINTS	TBD	
P3	PAINT	PAINT, INTERIOR, FLAT, TYPICAL CEILINGS	ICI PAINTS	TBD	
P4	PAINT	PAINT, INTERIOR, SATIN, BATH CEILINGS	ICI PAINTS	TBD	
P5	PAINT	PAINT, INTERIOR, SEMI-GLOSS, TYPICAL TRIM AND DOORS	ICI PAINTS	TBD	
P6	PAINT	PAINT, EXTERIOR, SEMI-GLOSS, EXTERIOR DOOR CASING & JAMB	ICI PAINTS	(E)	MATCH (E)
P7	PAINT	PAINT, EXTERIOR, SEMI-GLOSS	ICI PAINTS	(E)	MATCH (E)
R1	ROOFING	PVC			
T1	TILE	12X12 BATHTUB & SHOWER SURROUND TILE TO CEILING		TBD	
T2	TILE	RECESSED SHELF, 13X13			
T3	TILE	SHOWER FLOOR TILE, 4X8 OR SMALLER		TBD	
WF1	WALL FINISH	5/8" GYPSUM, CATS PAW FINISH, SQUARE CORNERS			
WF2	WALL FINISH	PAINT FINISH, SQUARE CORNERS			

Material schedule and location

DOOR SCHEDULE													
ID	ELEVATION	WIDTH	HT	THCK	QTY	DESCRIPTION	GLZ	TEMP	HINGES	LOCKSET	COMMENTS	U-FACTOR	SHGC
D01		12'-0"	8'-0"	1 3/4"	1	FOLDING	DUAL	Y	OIL RUBBED BRONZE	KEYED		0.29	0.23
D02		2'-6"	6'-8"	1 3/8"	1	SWING, SINGLE LITE, OPAQUE	SINGL	Y	OIL RUBBED BRONZE	PRIVACY			
D03		2'-6"	6'-8"	1 3/8"	1	SWING, SINGLE LITE, OPAQUE	SINGL	Y	OIL RUBBED BRONZE	PRIVACY			
D04		4'-10"	6'-8"	1 3/8"	1	BI-FOLD LOUVERED				PULL			
D06		6'-0"	6'-8"	1 3/8"	1	BI-FOLD LOUVERED				PULL			

WINDOW SCHEDULE													
ID	ELEVATION	WIDTH	HT	HEAD HT	TYPE	DESCRIPTION	GLZ	U-FACTOR	SHGC	TEMP	EGRESS	HARDWARE	NOTES
W01		2'-6"	5'-0"	6'-8"	SLIDING	BEDROOM	DUAL	0.32	0.25		YES	OIL RUBBED BRONZE	

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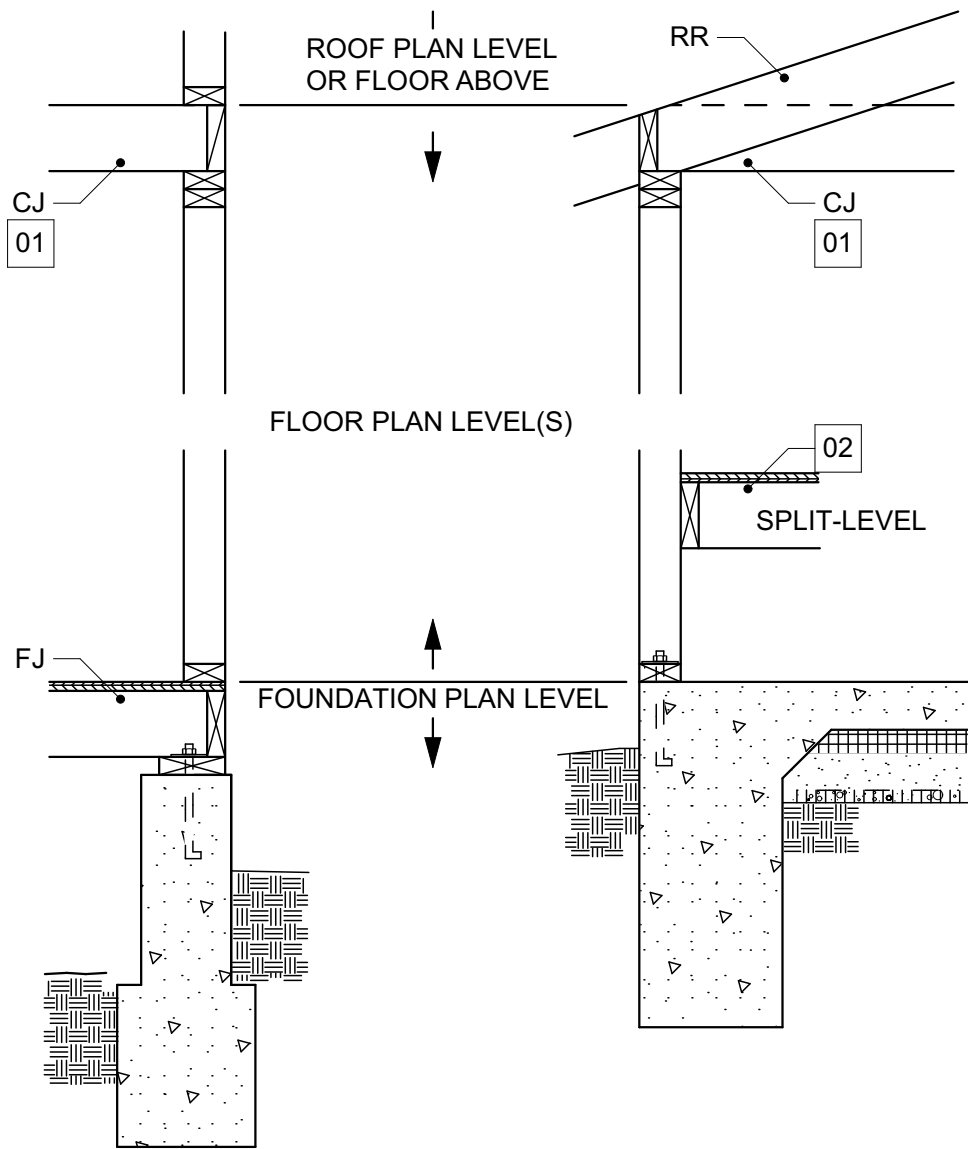
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SHEET

SCHEDULES

SPECIAL INSPECTION AGENCIES

PACIFIC MATERIALS LABORATORIES
35 SOUTH LA PATERA LANE
GOLETA, CALIFORNIA 93117
TEL: 805.964.6901
FAX: 805.964.6239



GENERAL NOTES -

- 51 ROOF PLANS MAY BE MERGED WITH FLOOR PLANS ON RELATIVELY SIMPLE PROJECTS WHERE THE ADDITIONAL INFORMATION WILL NOT UNDULY REDUCE READABILITY

KEYNOTES -

- 01 REFERENCED AS "CJ" IN PLAN VIEWS REGARDLES OF SINGLE OR MULTIPLE-STORY APPLICATIONS. IE, 2ND-STORY FLOOR JOISTS WILL BE REfferED TO AS "CJ" ON THE 1ST-STORY FRAMING PLAN
- 02 SPLIT-LEVELS REFERENCED AS "FJ" IN PLAN VIEWS

1 NOTES-PLAN CUT LINES

S-STRUCTURAL NOTES

- 1 GENERAL
1.1 ALL MATERIALS AND WORKMANSHIP ARE SUBJECT TO THE REVIEW OF THE ARCHITECT AND STRUCTURAL ENGINEER
1.2 DO NOT SCALE THE DRAWINGS TO OBTAIN DIMENSIONS
1.3 UNO, REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS
- 2 DISCREPANCIES
2.1 REPORT ANY AND ALL DISCREPANCIES, AMBIGUITIES, UNCLear ITEMS OR ITEMS THAT ARE SUBJECT TO MORE THAN ONE INTERPRETATION, ON THE DRAWINGS AND/OR SPECIFICATIONS TO THE STRUCTURAL ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH WORK
2.2 VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK. THE ARCHITECT AND STRUCTURAL ENGINEER ARE TO BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. CHECK AND COORDINATE ALL DIMENSIONS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND NON STRUCTURAL ITEMS NOT SHOWN ON THESE PLANS
- 3 DEMOLITION
3.1 DESIGN AND INSTALL ALL TEMPORARY BRACING AND SHORING TO ENSURE THE SAFETY OF THE WORK UNTIL IT IS IN ITS COMPLETED FORM. WHEN REQUIRED BY LAW, EMPLOY A CIVIL ENGINEER TO DESIGN SHORING, BRACING AND INSTALLATION PLANS FOR STRUCTURAL ITEMS
- 4 SCAFFOLDING
4.1 ALL SCAFFOLDING AND SHORING IS TO COMPLY WITH THE RULES AND REGULATIONS OF THE INDUSTRIAL SAFETY COMMISSION OF THE STATE OF CALIFORNIA
- 5 EXCAVATIONS
5.1 ALL EXCAVATIONS TO COMPLY WITH THE RULES AND REGULATIONS OF THE INDUSTRIAL SAFETY COMMISSION OF THE STATE OF CALIFORNIA
5.2 IF SOILS REPORT PRODUCED FOR PROJECT, OBSERVE EXCAVATION REQUIREMENTS STIPULATED WITHIN

SI- SPECIAL INSPECTIONS & STRUCTURAL OBSERVATIONS

- 1.0 ALL SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE CALIFORNIA BUILDING CODE
- 2.0 CONTRACTOR TO OBTAIN APPROPRIATE SPECIAL INSPECTION/OBSERVATION REPORT DOCUMENTATION PRIOR TO REQUESTING AN INSPECTION BY THE LOCAL BUILDING AUTHORITY
- 3.0 WINDWARD TO OBSERVE REINFORCEMENT STEEL PRIOR TO CONCRETE PLACEMENT
- 4.0 WINDWARD TO OBSERVE FRAMING & SHEAR WALL NAILING AFTER PLUMBING, MECHANICAL & ELECTRICAL ROUGH-IN WORK HAS BEEN COMPLETED
- 5.0 CALL 48 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS

GN- GENERAL NOTES

- 1.0 ALL CONSTRUCTION SHALL CONFORM TO THE 2019 CBC, 2019 CRC, 2019 CMC, 2019 CEC, 2019 CPC, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, 2019 CFC, 2019 CA ENERGY COMMISSION STANDARDS & ALL CITY OF SANTA BARBARA AMENDMENTS AS ADOPTED IN SANTA BARBARA CITY ORDINANCE 5780.
- 2.0 MARBORG INDUSTRIES SHALL BE USED FOR ALL CONSTRUCTION WASTE AND RECYCLING
- 3.0 UNLESS NOTED OTHERWISE, ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PER THE APPLICABLE PROVISIONS OF THESE DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS
- 4.0 THESE DOCUMENTS CONVEY MINIMUM CONSTRUCTION REQUIREMENTS AND ARE TO BE USED WHERE THE APPLICABLE CONDITIONS OCCUR. MORE STRINGENT REQUIREMENTS STIPULATED WITHIN RELEVANT MANUFACTURER'S INSTALLATION INSTRUCTIONS WILL SUPERSEDE
- 5.0 ALL WORK TO BE PERFORMED BY LICENSED & INSURED CONTRACTOR
- 6.0 THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, AND TECHNIQUES FOR CONSTRUCTION
- 7.0 ALL OSHA REGULATIONS SHALL BE FOLLOWED. GENERAL CONTRACTOR & EACH SUB-CONTRACTOR RESPONSIBLE FOR JOB-SITE SAFETY
- 8.0 EACH SUBCONTRACTOR IS RESPONSIBLE FOR DEPOSITING DEBRIS RESULTING FROM THEIR WORK IN THE JOB-SITE CONTAINER
- 9.0 ALL DIMENSIONS, UNLESS OTHERWISE INDICATED, ARE TO FACE OF STUD, CONCRETE, OR MASONRY
- 10.0 SEE FORMS CF-1R & MF-1R SPECIFYING THE REQUIRED/MANDATORY ENERGY FEATURES FOR: WALL/CEILING INSULATION, WINDOW AREAS AND TYPES, HVAC SYSTEMS AND EFFICIENCY, DUCT INSULATION AND TESTING, LIGHTING TYPE AND SWITCHING, AND PIPE/HEATER INSULATION. PROVIDE COMPLETED FORM CF-6R UPON FINAL INSTALLATION OF ALL ENERGY SYSTEMS
- 11.0 PROJECTS WITH ZONING MODIFICATION APPROVALS, WITHIN 12" OF A SETBACK, OR WHERE CONDITIONS WARRANT, MAY REQUIRE A SURVEY TO VERIFY PROPOSED FOOTPRINT OF THE STRUCTURE PRIOR TO FOOTING INSPECTION. PROVIDE SURVEYOR VERIFICATION TO INSPECTOR IF REQUESTED BY BUILDING OFFICIAL
- 12.0 UNO, ALL REFERENCED STRUCTURAL HARDWARE TO BE FROM SIMPSON STRONG-TIE (ESR-2523)
- 13.0 AT THE TIME OF FINAL INSPECTION, AN OPERATION AND MAINTENANCE MANUAL, COMPACT DISC, OR WEB BASED REFERENCE SHALL BE PLACED IN THE BUILDING. THE MANUAL SHALL INCLUDE ALL OF THE ITEMS LISTED ON THE CALIFORNIA GREEN BUILDING STANDARDS CODE SECTION 4.410.1 [CGBSC 4.410]

SYMBOLS & ABBREVIATIONS	
Ø	DIAMETER
AB#	ANCHOR BOLT PER (6-S-501)
BLK	FULL DEPTH BLOCKING
BM	BEAM
BN	BOUNDRY NAL PER (S-506)
BP	BOTTOM PLATE
BTB	BEAM TO BEAM
CB	CEILING BEAM
CCJ	CONCRETE CONTROL JOINT
CJ	CEILING JOIST
CJP	COMPLETE JOINT PENETRATION GROOVE WELD
COL	COLUMN
CR	COMMON RAFTER
CW#	CONCRETE WALL & APPROX HEIGHT - SEE ARCH PLANS
CT	COLLAR TIE
DCW	DEMAN CRITICAL WELD PER ANSI/AISC 358
DP	DRILLED PIER
DWL	DOWEL
EN	EDGE NAL PER (S-506)
EW	EACH WAY
FB	FLOOR BEAM
FSC	FASCIA
FJ	FLOOR JOIST
FN	FIELD NAL PER (S-506)
GB#	GRADE BEAM PER FOUNDATION SCHEDULE
GRDR	GRIDER
HDR	HEADER PER (6-S-504)
HLA	HORIZONTAL STEEL PARALLEL TO LONG AXIS
HP	HELICAL PIER
HFB	HOLDOWN POST TO BEAM
HR	HIP RAFTER
HSA	HORIZONTAL STEEL PARALLEL TO SHORT AXIS
HSS	STRAPS
IMF	INTERMEDIATE MOMENT FRAME
JR	JACK RAFTER
KP	KING POST
KS	KING STUD
LDGR	LEDGER
LE	LENGTH OF EMBEDMENT INTO FOOTING
LSL	I LEVEL, TIMBERSTRAND, (ESR-1387)
LVL	I LEVEL, MICROLAM, (ESR-1387)
MM#	MASONRY WALL & APPROX HEIGHT - SEE ARCH PLANS
NLR	NAILER
OC	ON CENTER (CENTER-TO-CENTER) SPACING
OMF	ORDINARY MOMENT FRAME
PA	POST ABOVE
PAP	PER ARCHITECTURAL PLANS
PB	POST BELOW
PED	PEDESTAL
PLC	PLACES
PP	PER PLAN
PRL	PURLIN
PS	PER SCHEDULE
PSL	I LEVEL, PARALLAM, (ESR-1387)
PST	WOOD POST
PTB	POST TO BEAM
PTP	POST TO POST (ABOVE OR BELOW)
RAB	EPOXY RETROFIT
RB	ROOF OR RIDGE BEAM
RBS	REDUCED BEAM SECTION
RJ	RIM JOIST
RR	ROOF RAFTER
RTR	ROOF RAFTER TO ROOF RAFTER
SB	STRONGBACK
SBP	STEEL BASE PLATE
SCC	SLIP-CRITICAL CONNECTION
SMF	SPECIAL MOMENT FRAME
SOGW	SLAB ON GRADE & ID #
SP	SILL PLATE
STD	STUD
STR	STAR STRINGER
SW#	SHEAR WALL PER (S-506)
TJ	I LEVEL TRUSS JOIST (ESR-1153)
TP	TOP PLATES
TRM	TRIMMER
TYP	TYPICAL CONDITION WHERE OCCURS
UNO	UNLESS NOTED OTHERWISE
VLA	VERTICAL STEEL PARALLEL TO LONG AXIS
VR	VALLEY RAFTER
VSA	VERTICAL STEEL PARALLEL TO SHORT AXIS
X-X	X-X SHEAR WALL LENGTH
SW	SHEAR WALL LEVEL/AB ANCHOR BOLT SPACING
NEW CONCRETE	
EXISTING CONCRETE	

HOLDOWNS	
⓪	HOU2-SDS2.5 PER (7-S-502)
⓫	HOU4-SDS2.5 PER (7-S-502)
⓬	HOU5-SDS2.5 PER (7-S-502)
⓭	HOU8-SDS2.5 PER (7-S-502)
⓮	HOU11-SDS2.5 PER (7-S-502)
⓯	HOU14-SDS2.5 PER (7-S-502)
STRAPS	
<SB>	COIL STRAP PER PLAN (Hdg(D)ref #Lay(D)ref)
<XXXX>	STRAP

WINDWARD

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moving forward

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REGISTERED PROFESSIONAL ENGINEER

STEVEN C REICHEL

61155

RENEWAL 3/31/21

CIVIL

STATE OF CALIFORNIA

DATE:

4/9/2020

DATES

1/3/2020 INITIAL

03/03/2020 (E) FENCE SUBMITTAL

03/03/2020 DART RESUBMITTAL

03/18/2020 RESUBMITTAL

SCALE AS NOTED

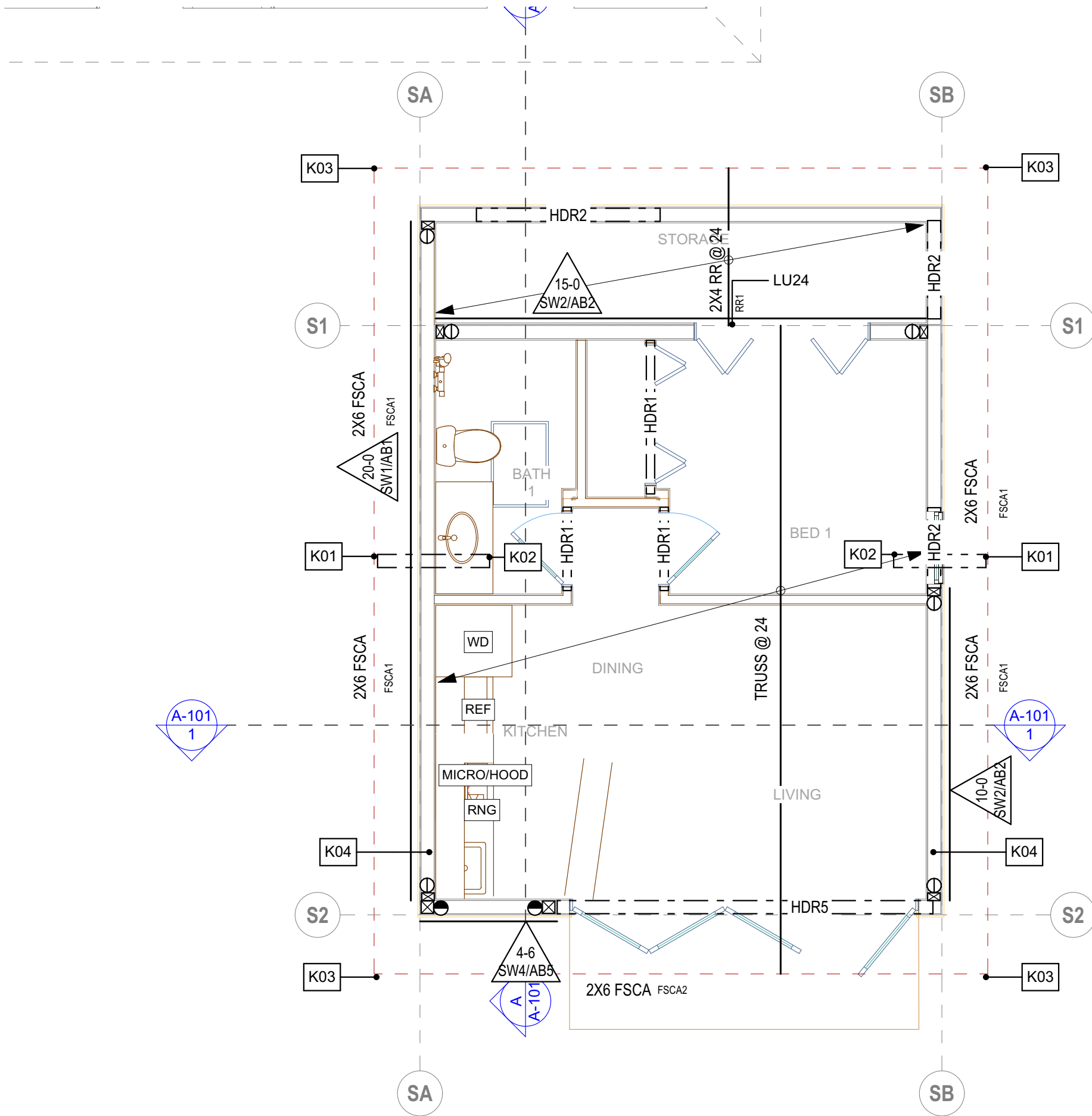
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SHEET

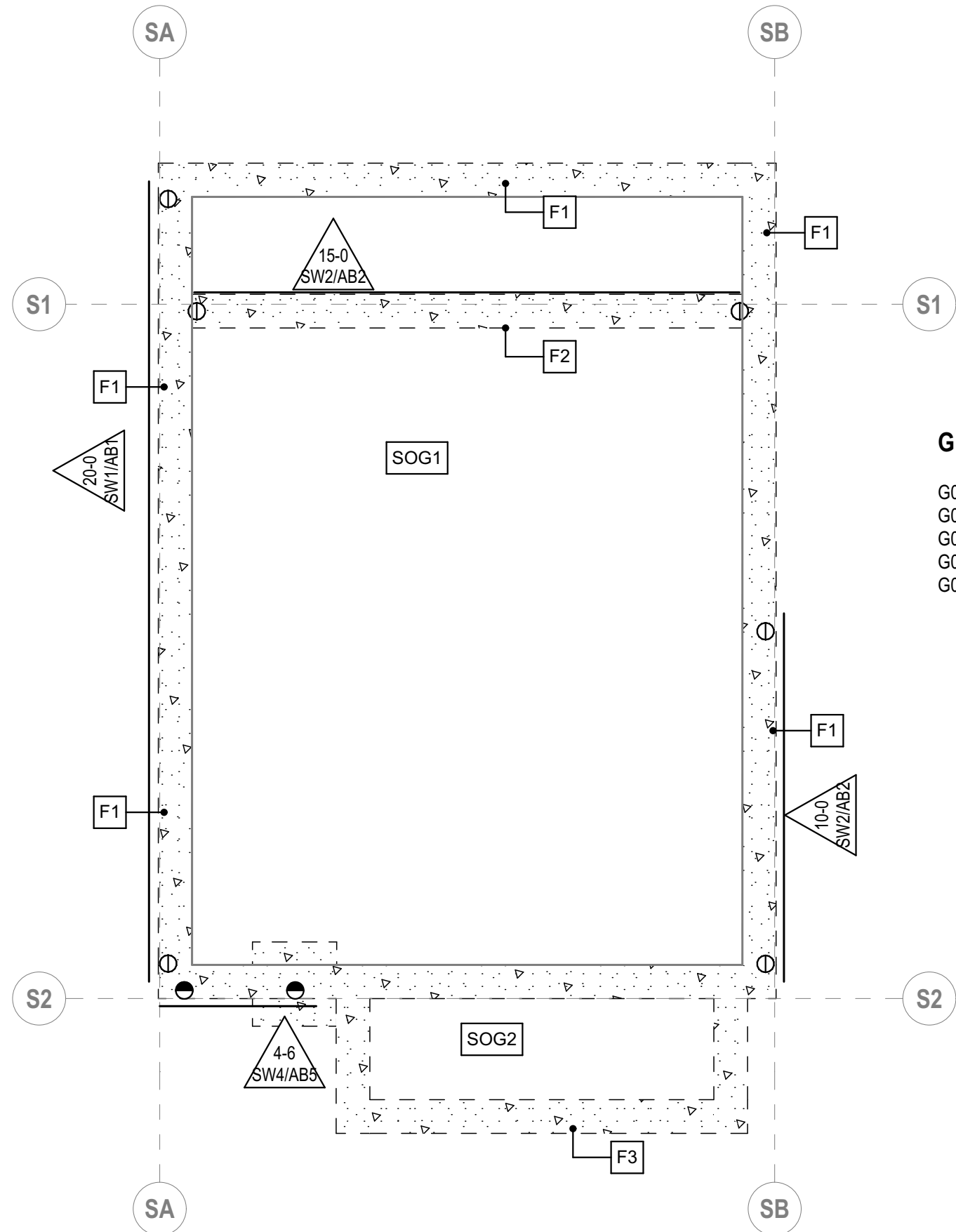
GENERAL

S-001

FOOTING SCHEDULE											
ID	DETAIL LOCATION	DETAIL NAME	DIMENSIONS W X L X D	HLA	HSA	VLA	VSA	PED DIMS W X L X D	PED STIRRUP	PED DOWELS	NOTES
F1	(4-S-502)	CONC-SOG FOUNDATION TO 24" DP	1-0 X PP X 1-6	2 - #4	NA	#4 @ SLAB OC	NA	NA	NA	NA	TIE VLA TO SLAB STL
F2	(3-S-502)	CONC-SOG @ INTERIOR FTNG	1-0 X PP X 1-6	2 - #4	NA	#4 @ SLAB OC	NA	NA	NA	NA	TIE VLA TO SLAB STL
F3	(6-S-502)	CONC-SOG EXTERIOR SAND BASE	1-0 X PP X 1-6	2 - #4	NA	#4 @ SLAB OC	NA	NA	NA	NA	TIE VLA TO SLAB STL
SOG1	(4-S-502)	CONC-SOG FOUNDATION TO 24" DP	4" THICK	#4 @ 24 OC	#4 @ 24 OC	NA	NA	NA	NA	NA	
SOG2	(6-S-502)	CONC-SOG EXTERIOR SAND BASE	4" THICK	#4 @ 24 OC	#4 @ 24 OC	NA	NA	NA	NA	NA	2% SLOPE AWAY FROM DOOR OPENING



2 FRAMING 1ST-STORY/LOWER ROOF
SCALE: 1/4" = 1'-0"



1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES -

- G01 REFER TO SYMBOLS & ABBREVIATIONS LEGEND FOR DEFINITIONS & RELATED DETAIL CALLOUT
G02 **LUMBER** - PER 8-S-503 FOR GENERAL LUMBER & CONNECTION REQUIREMENTS. LUMBER MOISTURE CONTENT TO BE LESS THAN 19% AT TIME OF INSTALLATION
G03 **NAILING** - PER 7-S-503 FOR GENERAL NAILING REQUIREMENTS. **HALSTEEL, TRUESPEC (COLOR-CODED) NAILS OR EQUIVALENT TO BE USED.** NAIL DIAMETERS DEFINED AS: 8D (0.131), 10D (0.148), 16D (0.162), 20D (0.192). **TOENAILING - PER 7-S-503 NOT TO EXCEED 8D. UNO, 16D TOENAILING NOT ALLOWED**
G04 **WALL FRAMING** - PER 1-S-503. UNO, EXTERIOR WALL WIDTH TO BE 6" NOMINAL & INTERIOR WALL WIDTH TO BE 4" NOMINAL
G05 **WALL OPENINGS** - PER 6-S-504
G06 **HEADERS** - UNO, TO BE PER 6-S-504
G07 **POSTS** - UNO, TO BE 4X4 WITH CONNECTIONS PER 3-S-504 - FRMG-PST/BM CONNECTIONS @ WALL
G08 **FLOOR SHEATHING** - TYPICAL FLOOR SHEATHING PER S-506
G09 **ROOF SHEATHING** - TYPICAL ROOF SHEATHING PER S-506
G10 **SHEAR WALL & SHEATHING** - PER S-506. UNO, ALL EXTERIOR WALLS TO BE SHEATHED
G11 TYPICAL ROOF-TO-WALL, FLOOR-TO-FLOOR, & FLOOR-TO-FOUNDATION CONNECTIONS PER S-506

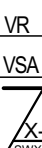
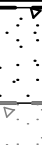

KEYNOTES -

- K01 6X6 OUTLOOKER TO FSCA 2-16D NAILS EA FSCIA 4-TOTAL
K02 EN 2-16D TO TRUSS AVOID CONNECTION HARDWARE @ JOINT
K03 FSCA PER 4-S-505 FRMG-FASCIA
K04 BALLOON FRAME WALLS

GENERAL NOTES -

- G01 REFER TO SYMBOLS & ABBREVIATIONS LEGEND FOR DEFINITIONS & RELATED DETAIL CALLOUT
G02 **CONCRETE** - GENERAL REQUIREMENTS PER 4-S-501
G03 **FOOTINGS** - UNO. FOOTINGS TO BE AT LEAST 12" INTO HARD UNDISTURBED SOIL & 18" BELOW FINAL EXTERIOR GRADE
G04 **ANCHOR BOLTS** - UNO BY 'ABX' DESIGNATION, ANCHOR BOLT SPACING TO BE 6-FT OC, PER 6-S-501
G07 **HOLDOWNS** - PER 7-S-502

SYMBOLS & ABBREVIATIONS	
Ø	DIAMETER
AB#	ANCHOR BOLT PER (6-S-501)
BLK	FULL DEPTH BLOCKING
BM	BEAM
BN	BOUNDARY NAIL PER (S-506)
BP	BOTTOM PLATE
BTB	BEAM TO BEAM
CB	CEILING BEAM
CCJ	CONCRETE CONTROL JOINT
CJ	CEILING JOIST
CJP	COMPLETE JOINT PENETRATION GROOVE WELD
COL	COLUMN
CR	COMMON RAFTER
CWW	CONCRETE WALL & APPROX HEIGHT - SEE ARCH PLANS
CT	COLLAR TIE
CDW	DEMAN CRITICAL WELD PER ANSI/AISC 358
DP	DRILLED PIER
DWL	DOVEL
EN	EDGE NAIL PER (S-506)
EW	EACH WAY
FB	FLOOR BEAM
FSC	FASCIA
FJ	FLOOR JOIST
FN	FIELD NAIL PER (S-506)
GBW	GRADE BEAM PER FOUNDATION SCHEDULE
GRDR	GIRDER
HDR	HEADER PER (6-S-504)
HLA	HORIZONTAL STEEL PARALLEL TO LONG AXIS
HP	HELICAL PIER
HPB	HOLDOWN POST TO BEAM
HR	HIP RAFTER
HSA	HORIZONTAL STEEL PARALLEL TO SHORT AXIS
HSS	STRAPS
IMF	INTERMEDIATE MOMENT FRAME
JR	JACK RAFTER
KP	KING POST
KS	KING STUD
LDGR	LEDGER
LE	LENGTH OF EMBEDMENT INTO FOOTING
LSL	LEVEL, TIMBERSTRAND, (ESR-1387)
LVL	LEVEL, MICROLAM, (ESR-1387)
MW	MASONRY WALL & APPROX HEIGHT - SEE ARCH PLANS
NLR	NAILER
OC	ON CENTER (CENTER-TO-CENTER) SPACING
OMF	ORDINARY MOMENT FRAME
PA	POST ABOVE
PAP	PER ARCHITECTURAL PLANS
PB	POST BELOW
PED	PEDESTAL
PLC	PLACES
PP	PER PLAN
PRL	PURLIN
PS	PER SCHEDULE
PSL	LEVEL, PARALLAM, (ESR-1387)
PST	WOOD POST
PTB	POST TO BEAM
PTP	POST TO POST (ABOVE OR BELOW)
RAB	EPOXY RETROFIT
RB	ROOF OR RIDGE BEAM
RBS	REDUCED BEAM SECTION
RJ	RIM JOIST
RR	ROOF RAFTER
RTR	ROOF RAFTER TO ROOF RAFTER
SB	STRONGBACK
SBP	STEEL BASE PLATE
SCC	SLIP-CRITICAL CONNECTION
SMF	SPECIAL MOMENT FRAME
SOG#	SLAB ON GRADE & ID #
SP	SILL PLATE
STD	STUD
STR	STAIR STRINGER
SWW	SHEAR WALL PER (S-506)
TJI	LEVEL TRUSS JOIST (ESR-1153)
TP	TOP PLATES
TRM	TRIMMER
TYP	TYPICAL CONDITION WHERE OCCURS
UNO	UNLESS NOTED OTHERWISE
VLA	VERTICAL STEEL PARALLEL TO LONG AXIS
VR	VALLEY RAFTER
VSA	VERTICAL STEEL PARALLEL TO SHORT AXIS
X-X	SHEAR WALL LENGTH
SW	SHEAR WALL LEVEL/AB ANCHOR BOLT SPACING

NLR	NAILER	
OC	ON CENTER (CENTER-TO-CENTER) SPACING	
OMF	ORDINARY MOMENT FRAME	
PA	POST ABOVE	
PAP	PER ARCHITECTURAL PLANS	
PB	POST BELOW	
PED	PEDESTAL	
PLC	PLACES	
PP	PER PLAN	
PRL	PURLIN	=====
PS	PER SCHEDULE	
PSL	LEVEL, PARALLAM, (ESR-1387)	=====
PST	WOOD POST	
PTB	POST TO BEAM	
PTP	POST TO POST (ABOVE OR BELOW)	
RAB	EPOXY RETROFIT	
RB	ROOF OR RIDGE BEAM	=====
RBS	REDUCED BEAM SECTION	=====
RJ	RIIM JOIST	=====
RR	ROOF RAFTER	
RTR	ROOF RAFTER TO ROOF RAFTER	
SB	STRONGBACK	
SBP	STEEL BASE PLATE	
SOC	SLIP-CRITICAL CONNECTION	
SMF	SPECIAL MOMENT FRAME	
SOGr	SLAB ON GRADE & ID #	
SP	SILL PLATE	
STD	STUD	
STR	STAIR STRINGER	=====
SWW	SHEAR WALL PER (S-506)	
TJI	LEVEL TRUSS JOIST (ESR-1153)	=====
TP	TOP PLATES	
TRM	TRIMMER	
TYP	TYPICAL CONDITION WHERE OCCURS	
UNO	UNLESS NOTED OTHERWISE	
VLA	VERTICAL STEEL PARALLEL TO LONG AXIS	
VR	VALLEY RAFTER	
VSA	VERTICAL STEEL PARALLEL TO SHORT AXIS	
	X-X: SHEAR WALL LENGTH SW: SHEAR WALL LEVEL/AB: ANCHOR BOLT SPACING	
	NEW CONCRETE	
	EXISTING CONCRETE	

DATES	
1/3/2020	INITIAL
03/03/2020	(E) FENCE SUBMITTAL
03/03/2020	DART RESUBMITTAL
03/18/2020	RESUBMITTAL
SCALE AS NOTED	
CREATED BY: WDS	
SHEET FOUNDATION/ 1ST STORY FRAMING PLAN	
S-101	

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G-003	ENERGY ANALYSIS
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S-502	CONCRETE DETAILS
S-503	FRAMING DETAILS
S-504	FRAMING DETAILS
S-505	FRAMING DETAILS
S-506	SW & SHEATHING DETAILS
P-101	PLUMBING PLAN
M-101	MECH PLAN

DATE: 4/9/2020

DATES

1/3/2020	INITIAL
03/03/2020	(E) FENCE SUBMITTAL
03/03/2020	DART RESUBMITTAL
03/18/2020	RESUBMITTAL

SCALE AS NOTED

CREATED BY: WDS

SHEET
FOUNDATION/ 1ST STORY
FRAMING PLAN

S-101

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M-101	MECH PLAN



DATE: 4/9/2020

DATES

1/3/2020	INITIAL
03/03/2020	(E) FENCE SUBMITTAL
03/03/2020	DART RESUBMITTAL
03/18/2020	RESUBMITTAL

SCALE AS NOTED

CREATED BY: WDS

SHEET

CONCRETE DETAILS

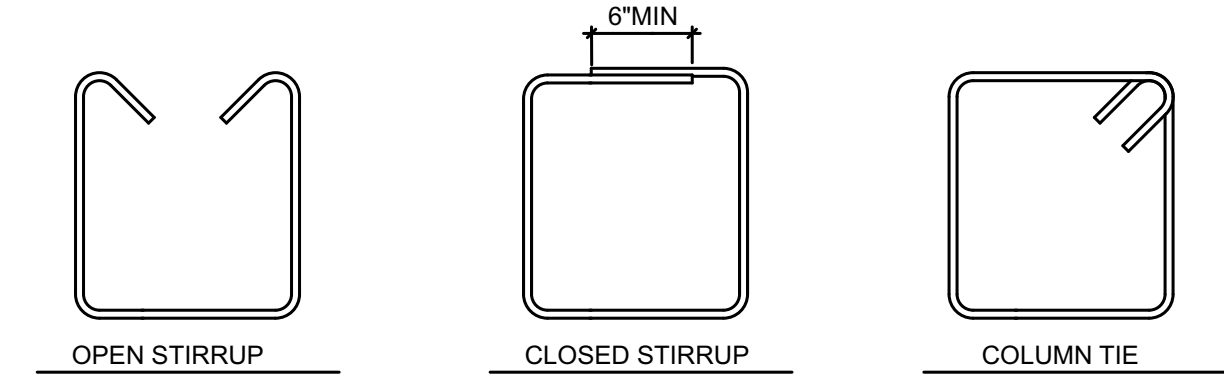
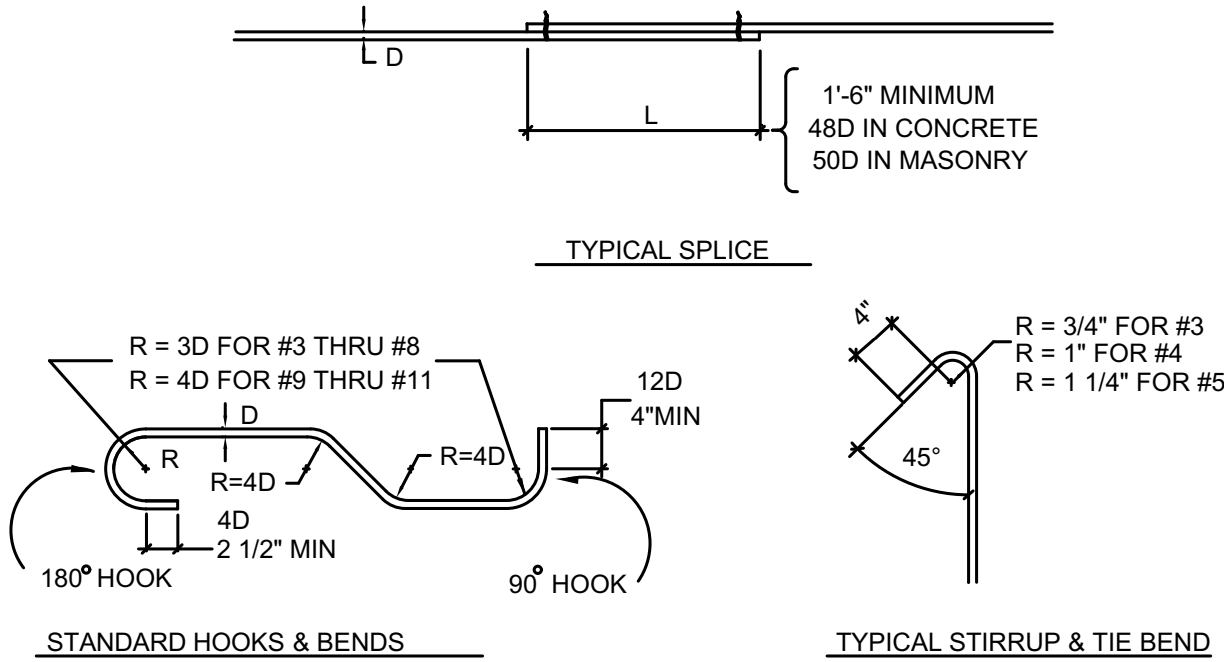
S-501

CONC - CONCRETE NOTES

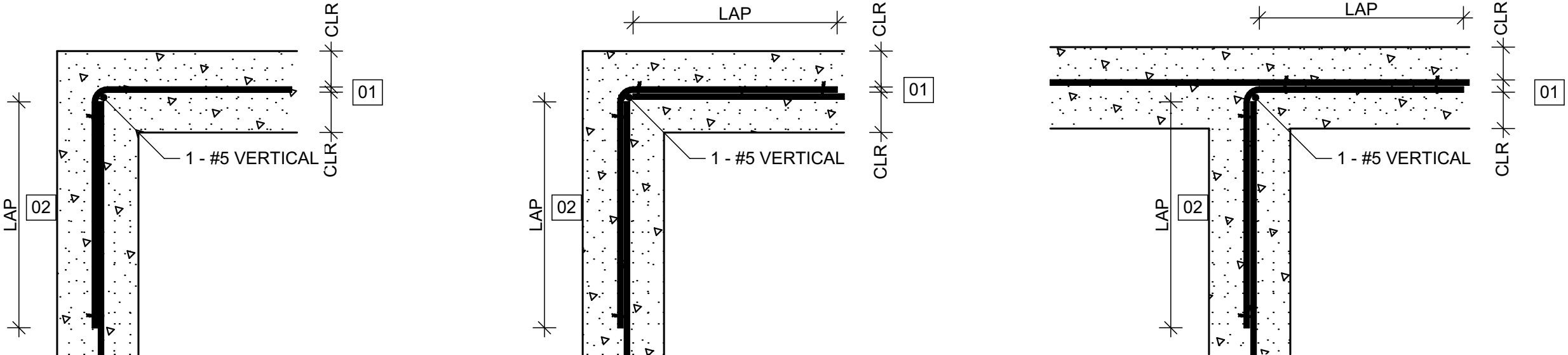
- GENERAL
- UNLESS NOTED OTHERWISE, ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PER THE APPLICABLE PROVISIONS OF THESE DOCUMENTS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS REFER TO DETAIL SHEETS FOR TYPICAL CONSTRUCTION REQUIREMENTS
- CONCRETE
- UNO PER PLAN, MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:
 - A - FOOTINGS, FLAT WORK, AND MISCELLANEOUS ITEMS
 - A-1 LIGHT-FRAME CONSTRUCTION WITH OCCUPANCIES R AND U <= 2 STORIES IN HEIGHT: 2,500 PSI
 - A-2 SEISMIC ZONES A & C: 2,500 PSI
 - A-3 OTHER THAN AS NOTED ABOVE, STRUCTURES >= SEISMIC ZONE D: 3,000 PSI
 - B - BEAMS AND COLUMNS: 3,000 PSI
 - C - GRADE BEAMS: 3,000 PSI
- CEMENT IS TO BE TYPE II, LOW ALKALI (NO HIGHER THAN .4%), CONFORMING TO ASTM C 150. UP TO A MAXIMUM OF 18% OF CEMENT MAY BE SUBSTITUTED WITH FLY ASH (TYPE 'F').
- ALL AGGREGATE USED IN CONCRETE ARE TO CONFORM TO ASTM C 33. AGGREGATE SHALL BE UNIFORMLY GRADED, WITH THE MAXIMUM AGGREGATE SIZE REQUIRED TO BE 1" TO 3/4".
- COARSE AND FINE AGGREGATE (SAND) ARE TO COME FROM A SOURCE PROVEN TO HAVE NON-REACTIVE CHARACTERISTICS. COARSE AGGREGATE WHICH IS HEAVY MEDIA PROCESSED (SATICOY, SISQUOC), SANTA MARGARITA ROCK, OR SAN GABRIEL ROCK WILL BE CONSIDERED AS MEETING THE CRITERIA OF NON-REACTIVITY. MOORPARK SAND (QUALITY, BEST, BLUE STAR) WILL BE CONSIDERED AS MEETING THE REQUIREMENTS OF NON-REACTIVITY. OTHER AGGREGATES MEETING OR EXCEEDING THE AGGREGATE REACTIVITY CHARACTERISTICS LISTED ABOVE ARE ACCEPTABLE UPON SUBMITTAL OF ADEQUATE DOCUMENTATION (ASTM C289 AND ASTM C277 TEST RESULTS THAT ARE NOT MORE THAN 2 YEARS OLD). USE AN APPROXIMATE 60% TO 40% RATIO OF COARSE AGGREGATE TO FINE AGGREGATE (BY WEIGHT) RESPECTIVELY.
- SECURE IN POSITION PRIOR TO INSPECTION AND POURING CONCRETE. ALL ANCHOR BOLTS, HOLDOWN ANCHORS, REINFORCING STEEL, DOWELS, INSERTS, ETC. FOR ANCHOR BOLTS AND HOLDOWNS, USE SIMPSON ANCHOR BOLT HOLDERS. STABBING BOLTS AFTER POURING SLAB NOT ALLOWED.
- CONCRETE SHALL CONTAIN A MINIMUM OF 5.5 SACKS OF CEMENT PER CUBIC YARD, A MAXIMUM WATER/CEMENT RATIO OF 0.5, AND SHALL HAVE A SLUMP NO GREATER THAN 4". DO NOT EXCEED 36 GALLONS OF WATER PER CUBIC YARD OF CONCRETE (8.5 GALS/ACK).
- CONTINUOUS INSPECTION BY A DEPUTY INSPECTOR APPROVED BY THE BUILDING DEPARTMENT IS REQUIRED FOR ALL CONCRETE WITH AN ULTIMATE COMPRESSIVE STRENGTH GREATER THAN 2500 PSI
- MAKE AND TEST CONCRETE CYLINDERS IN ACCORDANCE WITH SECTION 1905 CBC
- SPRAY SLABS WITH A CURING COMPOUND IMMEDIATELY AFTER FINISHING
- DO NOT PLACE BACKFILL BEHIND RETAINING WALLS SOONER THAN 14 DAYS AFTER CONCRETE OR GROUT IS PLACED
- VIBRATE ALL CONCRETE AS IT IS BEING PLACED WITH ELECTRICALLY OPERATED VIBRATING EQUIPMENT
- REINFORCEMENT
- REINFORCING BARS ARE TO BE OF INTERMEDIATE GRADE CONFORMING TO ASTM A 615 GRADE 60
- WELDED REINFORCING BARS TO CONFORM TO ASTM A706
- DRYPACK
- DRYPACK MAY BE USED UNDER BASE PLATES WHOSE LARGEST DIMENSION DOES NOT EXCEED 12 INCHES. MIX IN THE PROPORTIONS OF 1 PART PORTLAND CEMENT TO 2 1/2 PARTS SAND. ADD ONLY ENOUGH WATER SO THAT A PALM SIZED BALL OF DRYPACK WILL RETAIN ITS SHAPE
- WHERE THE LARGEST DIMENSION OF A BEARING OR BASE PLATE EXCEEDS 12 INCHES, OR FOR SMALLER PLATES, USE A POURABLE NON SHRINK, NON-METALLIC, HIGH STRENGTH GROUT. MINIMUM 7 DAY ULTIMATE COMPRESSIVE STRENGTH IS 5,000 PSI. INSTALL IN CONFORMANCE TO THE MANUFACTURER'S RECOMMENDATIONS.
- FOUNDATIONS
- UNLESS NOTED OTHERWISE, ALL FOOTINGS TO EXTEND A MINIMUM OF 18 INCHES BELOW FINISHED GRADE & 12 INCHES INTO UNDISTURBED SOIL.
- PRIOR TO POURING CONCRETE FOUNDATIONS, ALL LOOSE EARTH, WATER, AND DEBRIS IS TO BE REMOVED FROM FOUNDATION BED
- PROVIDE FOR DE WATERING OF ALL EXCAVATIONS FROM EITHER SURFACE WATER OR SEEPAGE
- PROTECT ALL FOUNDATION EXCAVATIONS ON THE SITE FROM CAVING. OBSERVE OSHA REQUIREMENTS
- SECURE IN POSITION PRIOR TO INSPECTION AND POURING CONCRETE OR GROUTING BLOCK, ALL ANCHOR BOLTS, HOLDOWN ANCHORS, REINFORCING STEEL, DOWELS, INSERTS, ETC. FOR ANCHOR BOLTS AND HOLDOWNS. USE SIMPSON ANCHOR BOLT HOLDERS OR EQUIVA. **STABBING BOLTS AFTER POURING WILL NOT BE ALLOWED**
- FRAMING CONTRACTOR TO INSPECT LOCATION OF SHEAR WALL AB & HOLDOWNS PRIOR TO POUR
- ANCHOR BOLTS
- UNO, ANCHOR BOLTS AND THREADED STUDS (HOOKED, HEADED AND THREADED ANCHOR RODS) TO CONFORM TO ASTM F1554, GRADE 36

CONC-CONCRETE NOTES
NOT TO SCALE

REINFORCEMENT PROTECTION	
DESCRIPTION	CLR
CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH	3"
CAST AGAINST FORMS & PERMANENTLY EXPOSED TO EARTH OR WEATHER - ≤ #5 BAR	1.5"
CAST AGAINST FORMS & PERMANENTLY EXPOSED TO EARTH OR WEATHER - #6 - # 18 BARS	2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER - ≤ #11BAR	0.75"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER - #14 & # 18 BARS	1.5"
NOTE: WEATHER DENOTES DIRECT EXPOSURE TO MOISTURE AND TEMPERATURE CHANGES	



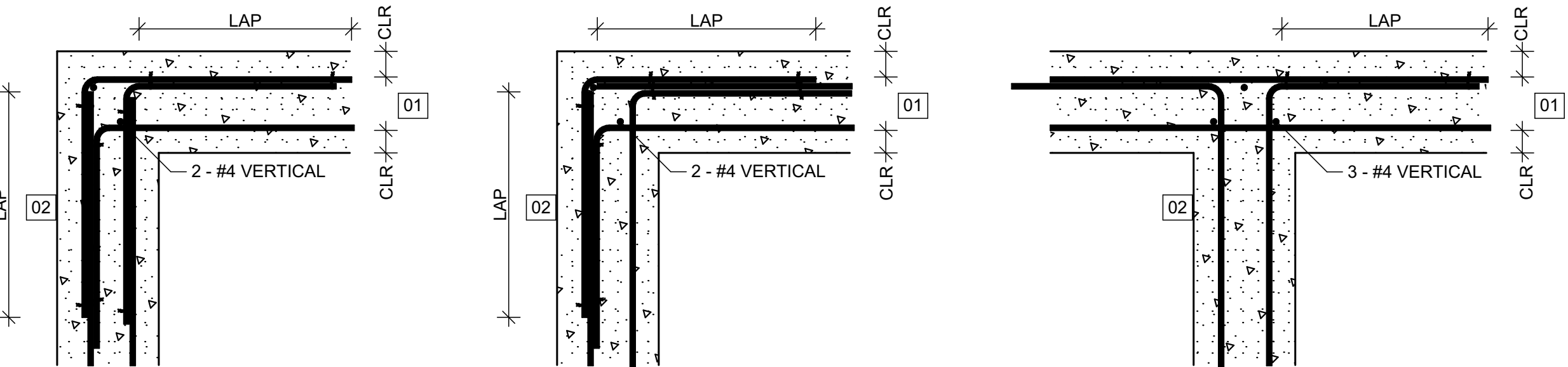
- GENERAL NOTES -
- ALL REINFORCEMENT SHALL BE BENT COLD
 - UNLESS NOTED OTHERWISE OR APPROVED BY LICENSED DESIGN PROFESSIONAL, PARTIALLY EMBEDDED REINFORCEMENT NOT TO BE FIELD BENT
 - REINFORCING BARS ARE TO BE OF INTERMEDIATE GRADE CONFORMING TO ASTM A 615 GRADE 60



CORNER - SINGLE LAYER OF STEEL

ALTERNATE CORNER - SINGLE LAYER OF STEEL

INTERSECTION - SINGLE LAYER OF STEEL



CORNER - DBL LAYER OF STEEL

ALTERNATE CORNER - DOUBLE LAYER OF STEEL

INTERSECTION - DOUBLE LAYER OF STEEL

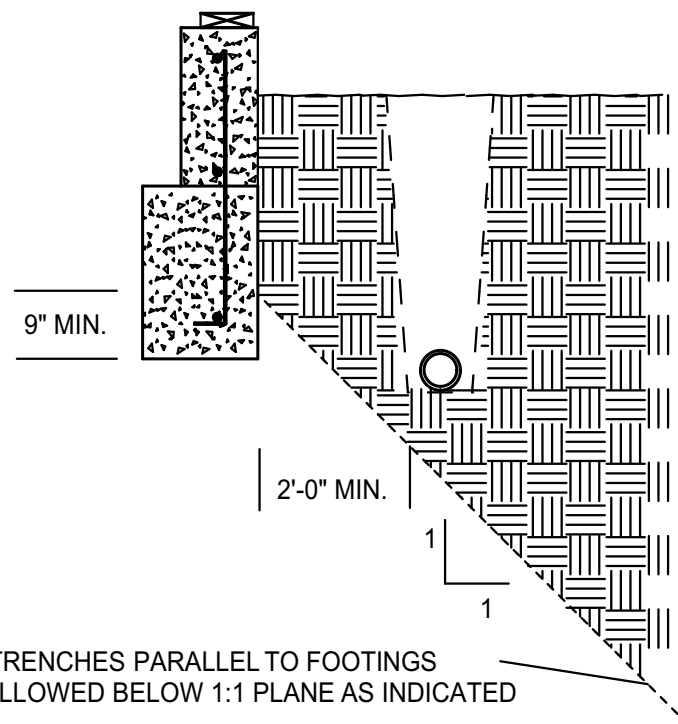
GENERAL CORNER REINFORCEMENT NOTES -

- ALL HORIZONTAL BARS IN WALLS, FOOTINGS, & BEAMS TO BE CONTINUOUS AROUND CORNERS AND INTERSECTIONS

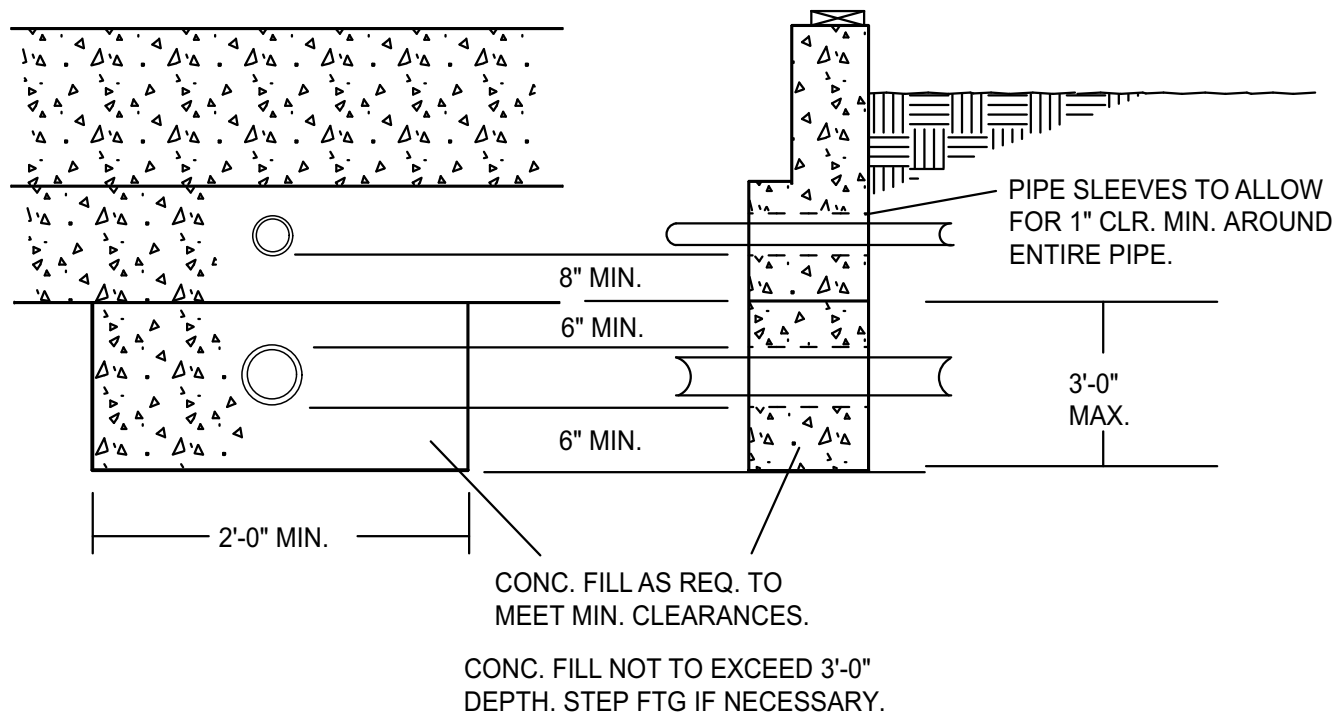
KEYNOTES -

- REFER TO REINFORCEMENT PROTECTION SCHEDULE
- REFER TO CONC-REINFORCEMENT FOR LAPS & BENDS REQUIREMENTS

CONC-REINFORCEMENT
NOT TO SCALE



PIPE & TRENCHES PARALLEL TO FOOTINGS

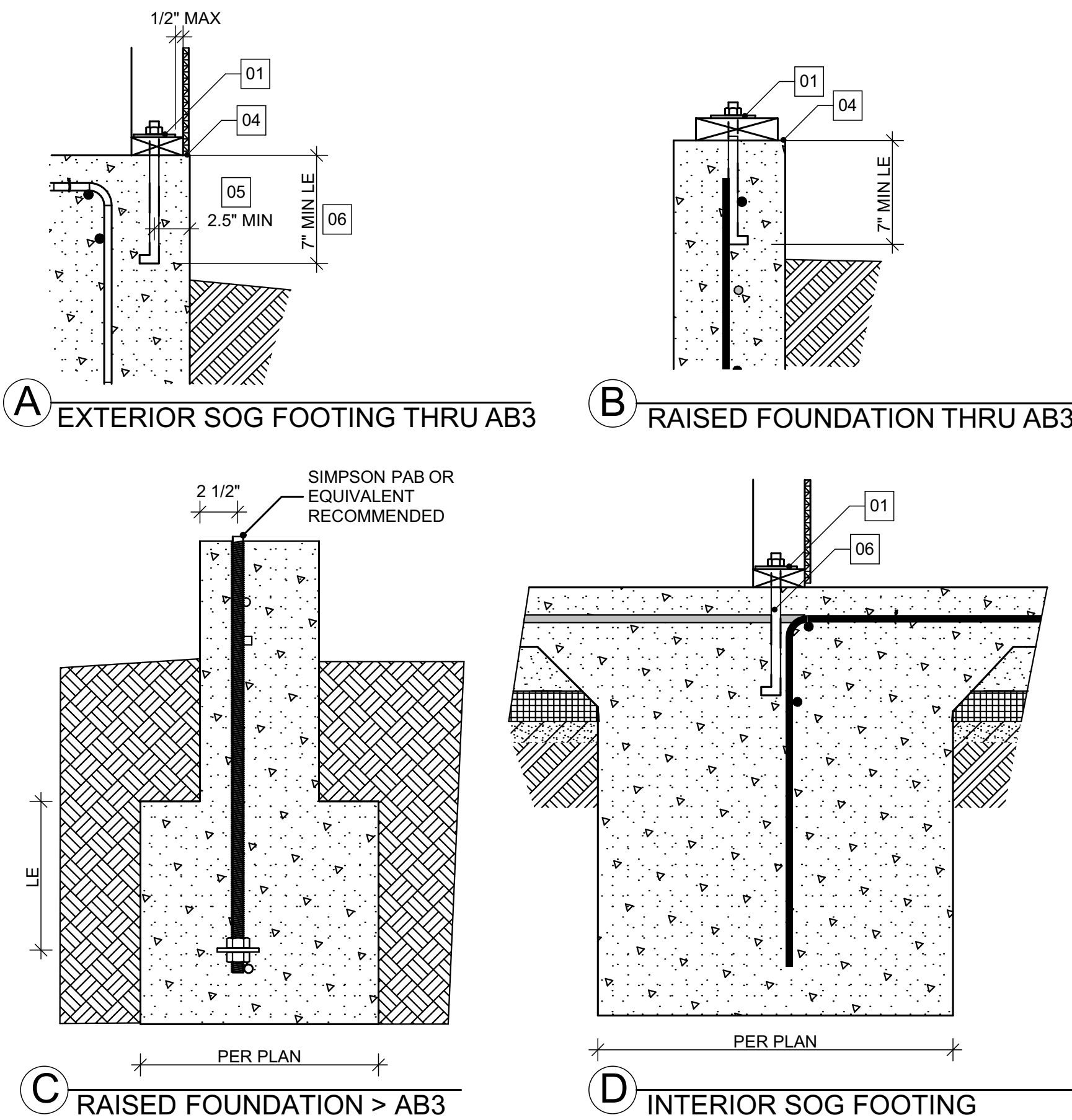


PIPE & TRENCHES TRANSVERSE TO FOOTINGS

GENERAL NOTES-

- DEEPEEN FOOTING IF PIPE DEPTH IS FIXED.
- BACKFILL & RECOMPACT TRENCHES PER SPECIFICATIONS.

CONC-PIPES & TRENCHES @ FNDN 1:1
NOT TO SCALE

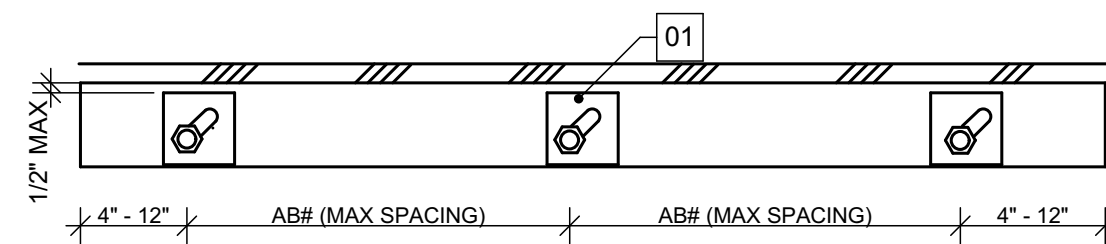


A EXTERIOR SOG FOOTING THRU AB3

B RAISED FOUNDATION THRU AB3

C RAISED FOUNDATION > AB3

D INTERIOR SOG FOOTING



SYMBOL	SLAB FNDN	RAISED FNDN	MAX SPACING	ø AB	LE
NON-BEARING (PARTITION) WALLS	NA	NA	48"	3/8" 03	NA
UNO	DETAIL A & D	DETAIL B	72" 02	5/8"	NA
AB1	DETAIL A & D	DETAIL B	48"	5/8"	7"
AB2	DETAIL A & D	DETAIL B	32"	5/8"	7"
AB3	DETAIL A & D	DETAIL B	24"	5/8"	7"
AB4	DETAIL A & D	DETAIL C	16"	5/8"	7"
AB5	DETAIL A & D	DETAIL C	8"	5/8"	7"

GENERAL NOTES -

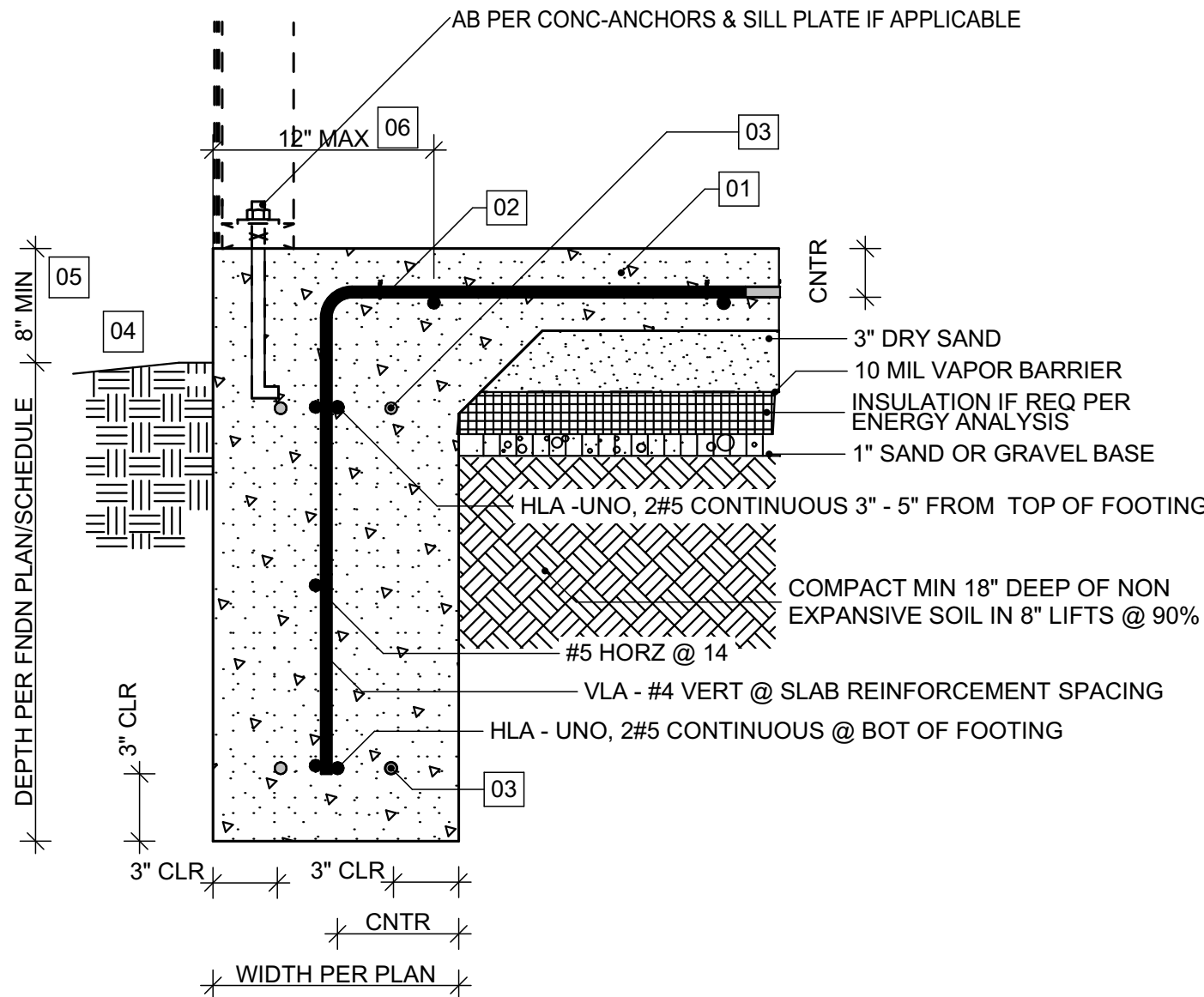
- UNO, ANCHOR BOLTS, WASHERS & THREADED RODS TO CONFORM TO ASTM F1554, GRADE 36
- REFER TO 'CONC-EPOXY ANCHOR BOLT' DETAIL FOR ANCOR BOLT RETROFIT CONDITIONS
- FINGER TIGHTEN ANCHOR BOLT NUT, PLUS 1/2 TURN
- SEE 'FRMNG-OVER ANCHOR BOLT' DETAIL WHEN STUD FALLS ON ANCHOR
- USE PRESSURE TREATED LUMBER WHERE IN CONTACT WITH CONCRETE
- PROVIDE A MINIMUM OF 2 ANCHOR BOLTS OR FASTENERS PER PLATE
- 1/2" MAX FACE OF SHEAR WALL PLYWOOD TO ANCHOR BOLT WASHER EDGE
- NAILS INTO TREATED LUMBER TO BE RATED FOR USE (ASTM A153, CLASS D)
- WASHER IN CONTACT WITH TREATED LUMBER TO BE GALVANIZED & RATED FOR USE

KEYNOTES -

- ANCHOR BOLT WASHERS TO BE MIN 3"x3"x0.229". EDGE OF WASHER TO BE WITHIN 0.5" OF SHEAR WALL PLYWOOD. SLOTTED WASHER WITH ADDITION OF CUT WASHER RECOMMENDED TO EASE INSTALLATION
- 48" OC MIN FOR STRUCTURES > 2 STORIES
- ALTERNATE ANCHORAGE FOR NON-BEARING WALL: ø 0.145" POWDER DRIVEN PINS W/MIN 1 1/4" PENETRATION INTO CONCRETE. SPACE POWDER DRIVEN ANCHORS AT 32" OC, AND A MAXIMUM OF 9" FROM ENDS. USE LOW VELOCITY DN FASTENERS BY HILTI (ICC ESR-1663), OR 1524-SDP FASTENERS BY RAMSET (ICC ESR-2690), OR OTHER APPROVED EQUAL (ICC REPORTS ARE REQUIRED).
- OFFSET SILL PLATE FROM EDGE OF FOUNDATION TO ALLOW FOR WALL SHEATHING
- CHECK 'CONC-REINFORCEMENT' MIN CLEARANCE REQUIREMENTS FOR BOLTS > 1" ø
- EXTEND ANCHOR BOLTS AS NEEDED TO OBSERVE MINIMUM EMBEDMENT DEPTHS IF 2-PART POUR

CONC-ANCHORS @ SILL PLATE
NOT TO SCALE

G-001	GENERAL AND SITE PLAN
G-002	ENERGY ANALYSIS
G-003	ENERGY ANALYSIS
G-004	GREEN CODE
G-005	GENERAL NOTES
A-101	PLAN ELEV SECT
A-601	SCHEDULES
S-001	GENERAL
S-101	FOUNDATION 1ST STORY FRAMING PLAN
S-501	CONCRETE DETAILS
S-502	CONCRETE DETAILS
S-503	FRAMING DETAILS
S-504	FRAMING DETAILS
S-505	FRAMING DETAILS
S-506	SW & SHEATHING DETAILS
P-101	PLUMBING PLAN
M-101	MECH PLAN



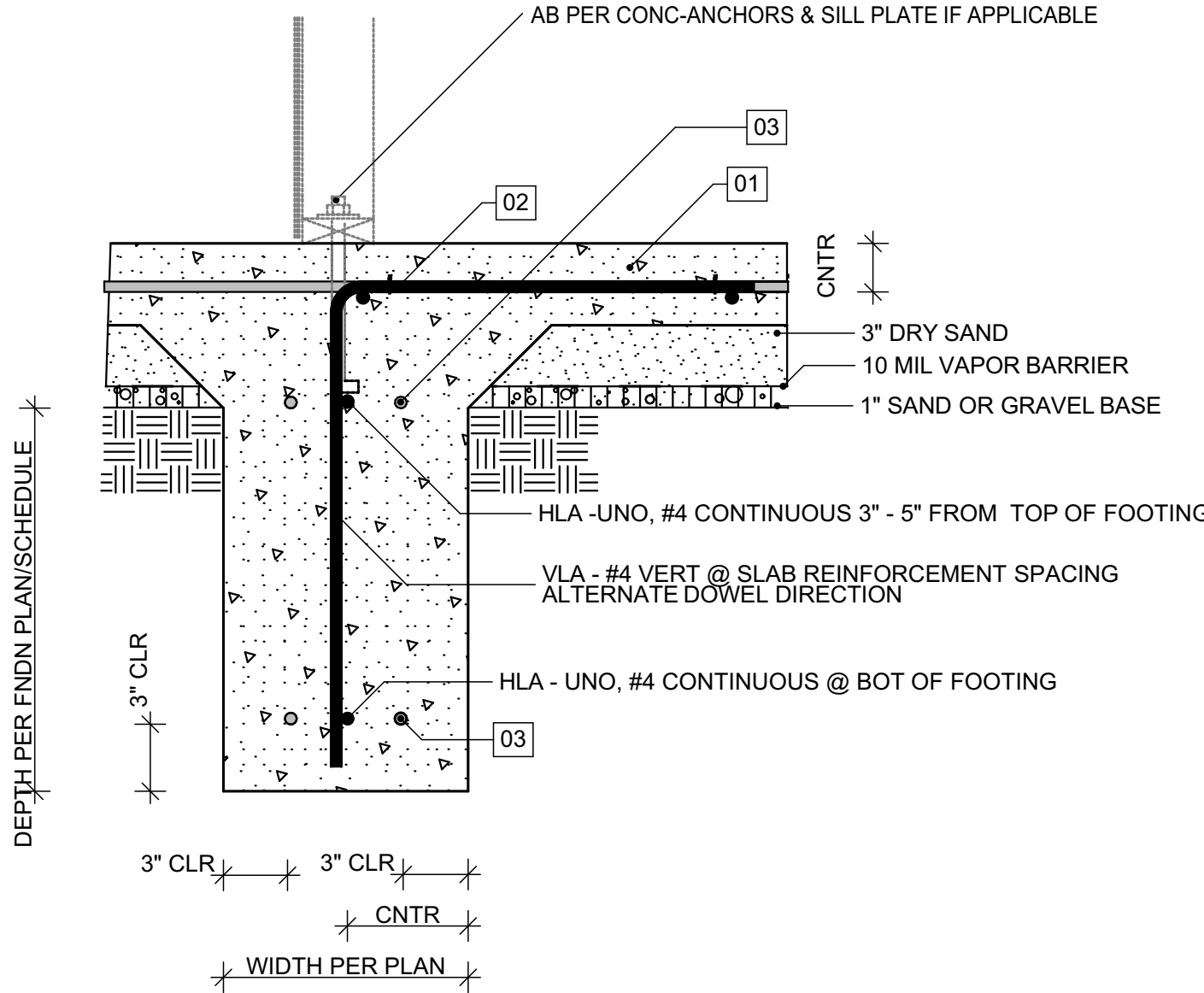
GENERAL NOTES -

- 51 8" MIN CLR BETWEEN GRADE AND UNTREATED LUMBER OR PLYWOOD
52 SLOPE AT BOTTOM OF FOOTING NOT TO EXCEED 10%
53 BOTTOM OF FOOTING EXCAVATIONS TO BE COMPACTED AT $\geq 90\%$ RELATIVE COMPACTION
54 PROVIDE MIN 6" LAPS @ VAPOR BARRIER BREAKS

KEYNOTES -

- 01 CONCRETE SLAB DEPTH & REINFORCEMENT PER PLAN. DISTANCE BETWEEN SLAB CONTROL JOINTS NOT TO EXCEED 30 TIMES THE SLAB THICKNESS. AS MUCH AS IS PRACTICAL, THE AREA DEFINED BY CONTROL JOINTS SHOULD BE SQUARE. DEPTH OF CONTROL JOINTS TO BE 1/4 THE DEPTH OF THE SLAB
02 MIN STEEL LAP & RADIUS REQUIREMENTS PER CONC-REINFORCEMENT. LAP DOWEL TO SLAB REINFORCEMENT STEEL (MIN LENGTH PER TYPICAL REINFORCEMENT 'LAP' REQUIREMENTS)
03 ADDITIONAL LONGITUDINAL STEEL (HLA), IF SPECIFIED PER PLAN, TO BE EVENLY DISTRIBUTED AT TOP & BOTTOM OF FOOTING.
04 5% MIN SLOPE OF GRADE FOR AT LEAST 10-FT AWAY FROM FOUNDATION. 2% FOR IMPERVIOUS SURFACES
05 WHERE MIN 8" CLR BETWEEN WOOD FRAMING AND SOIL CANNOT BE MET, TREAT BOTTOM 12" OF WOOD (PLYWOOD, STUDS, BLOCKING, ETC.) WITH COPPER NAPHTHENATE OR SIMILAR WOOD PRESERVATIVE
06 12" MAX FROM OUTSIDE EDGE TO 1ST RUN OF SLAB REINFORCEMENT

2 CONC-SOG FOUNDATION > 24" DP
NOT TO SCALE



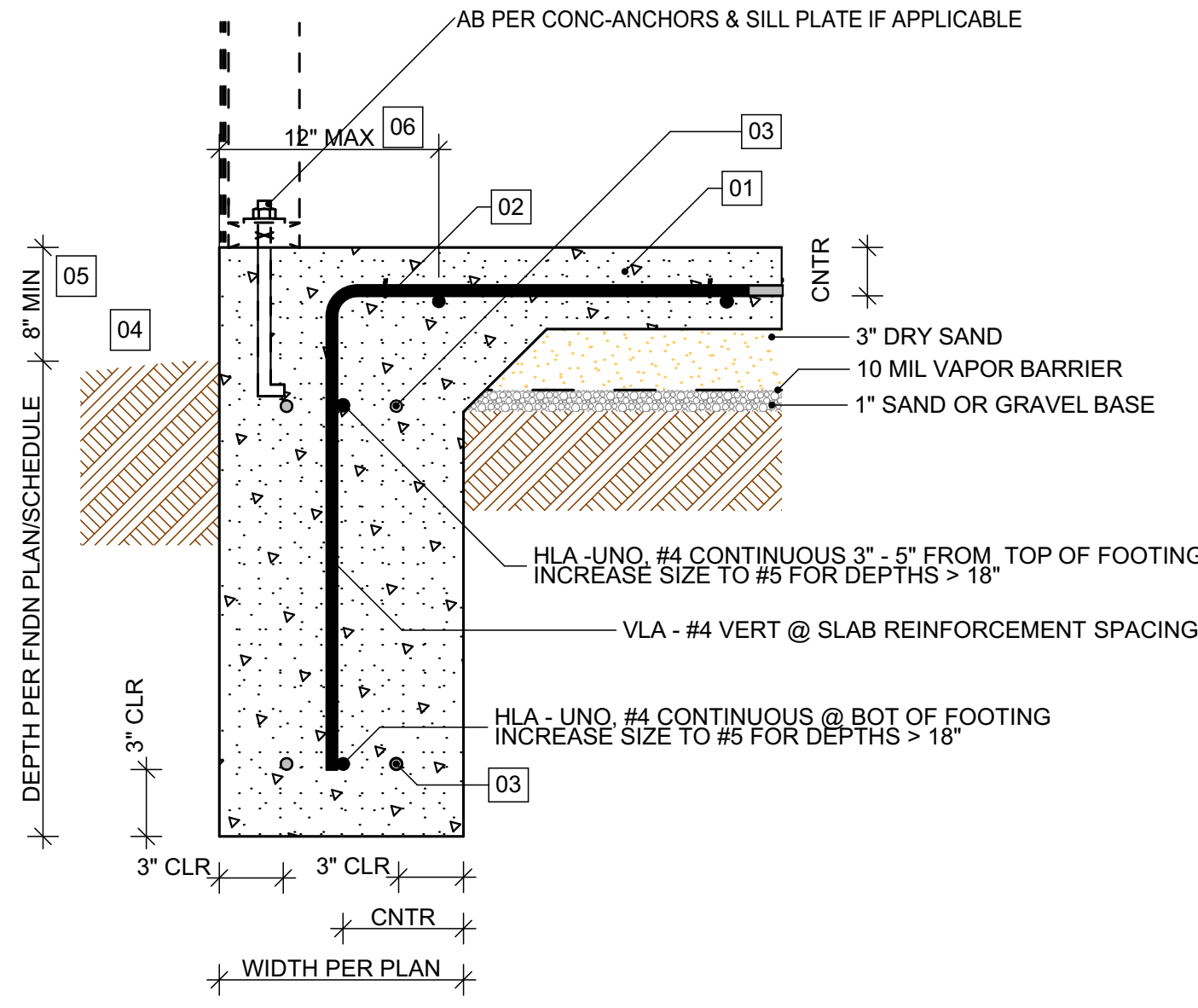
GENERAL NOTES -

- 51 8" MIN CLR BETWEEN GRADE AND UNTREATED LUMBER OR PLYWOOD
52 SLOPE AT BOTTOM OF FOOTING NOT TO EXCEED 10%
53 BOTTOM OF FOOTING EXCAVATIONS TO BE COMPACTED AT $\geq 90\%$ RELATIVE COMPACTION
54 PROVIDE MIN 6" LAPS @ VAPOR BARRIER BREAKS

KEYNOTES -

- 01 CONCRETE SLAB DEPTH & REINFORCEMENT PER PLAN. DISTANCE BETWEEN SLAB CONTROL JOINTS NOT TO EXCEED 30 TIMES THE SLAB THICKNESS. AS MUCH AS IS PRACTICAL, THE AREA DEFINED BY CONTROL JOINTS SHOULD BE SQUARE. DEPTH OF CONTROL JOINTS TO BE 1/4 THE DEPTH OF THE SLAB
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3 CONC-SOG @ INTERIOR FTNG
NOT TO SCALE



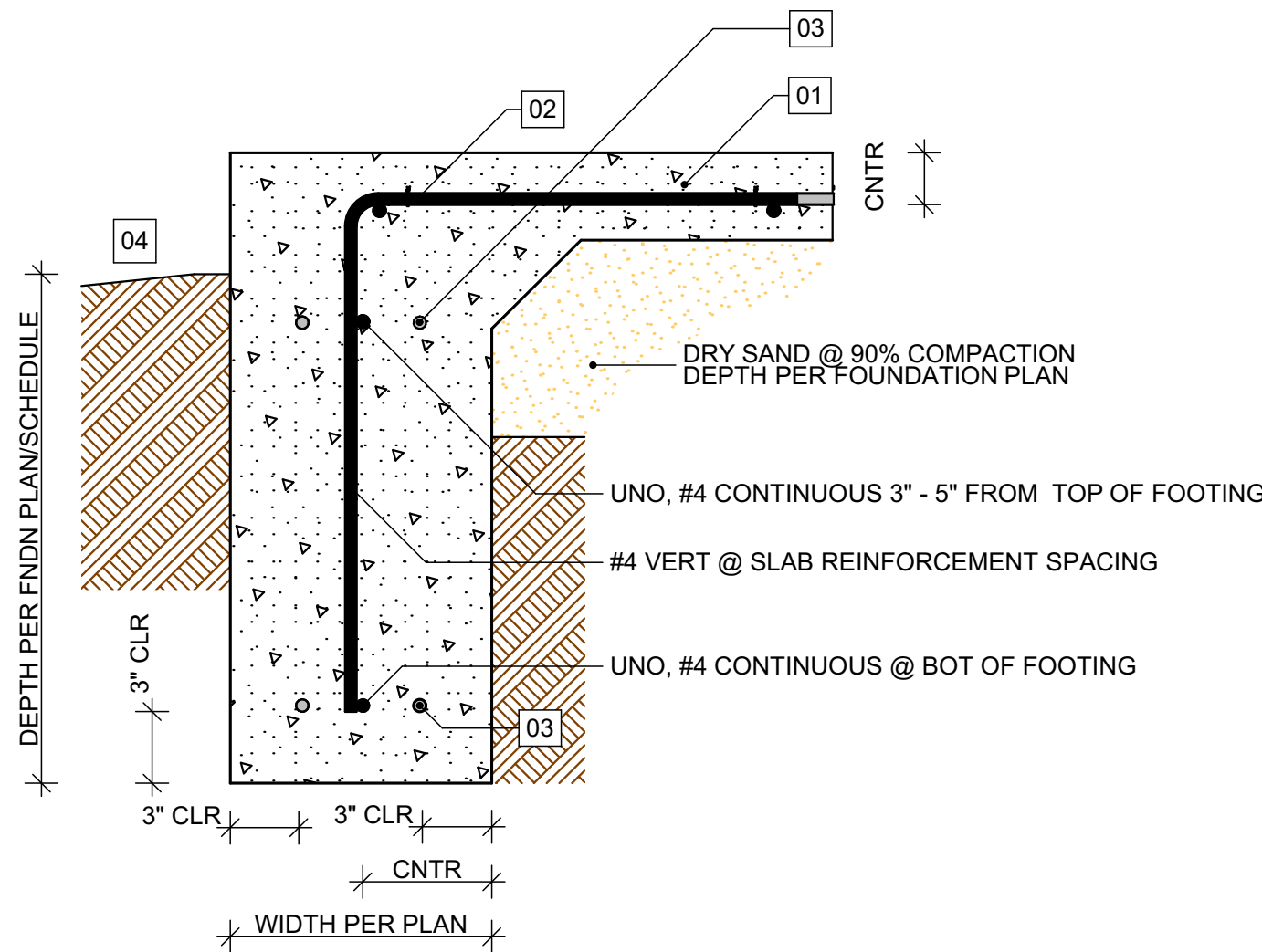
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54 PROVIDE MIN 6" LAPS @ VAPOR BARRIER BREAKS

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06 12" MAX FROM OUTSIDE EDGE TO 1ST RUN OF SLAB REINFORCEMENT

4 CONC-SOG FOUNDATION TO 24" DP
NOT TO SCALE



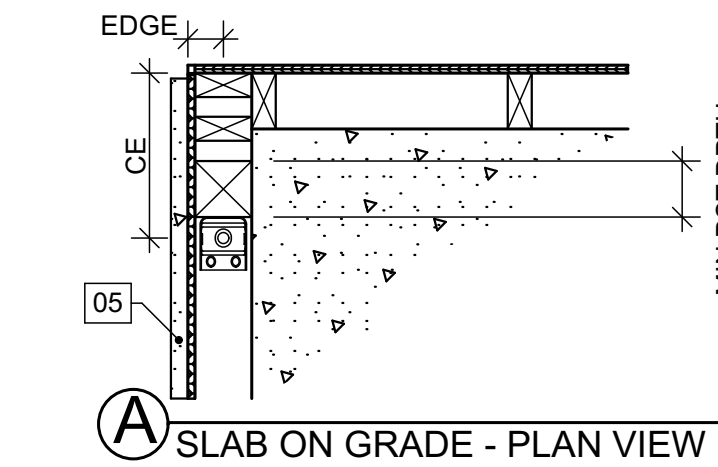
GENERAL NOTES -

- 51 SLOPE AT BOTTOM OF FOOTING NOT TO EXCEED 10%
52 BOTTOM OF FOOTING EXCAVATIONS TO BE COMPACTED AT $\geq 90\%$ RELATIVE COMPACTION

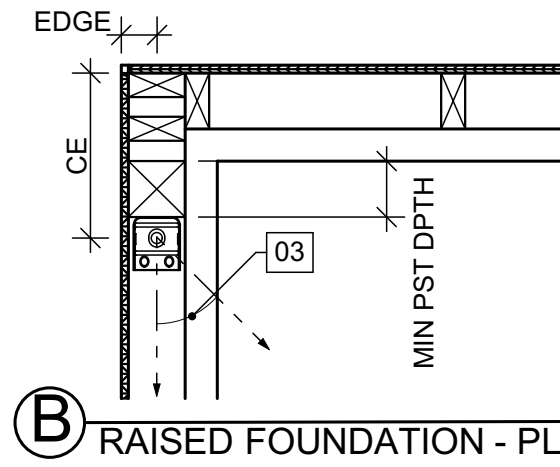
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- 01 CONCRETE SLAB DEPTH & REINFORCEMENT PER PLAN. DISTANCE BETWEEN SLAB CONTROL JOINTS NOT TO EXCEED 30 TIMES THE SLAB THICKNESS. AS MUCH AS IS PRACTICAL, THE AREA DEFINED BY CONTROL JOINTS SHOULD BE SQUARE. DEPTH OF CONTROL JOINTS TO BE 1/4 THE DEPTH OF THE SLAB
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04 5% MIN SLOPE OF GRADE FOR AT LEAST 10-FT AWAY FROM FOUNDATION. 2% FOR IMPERVIOUS SURFACES

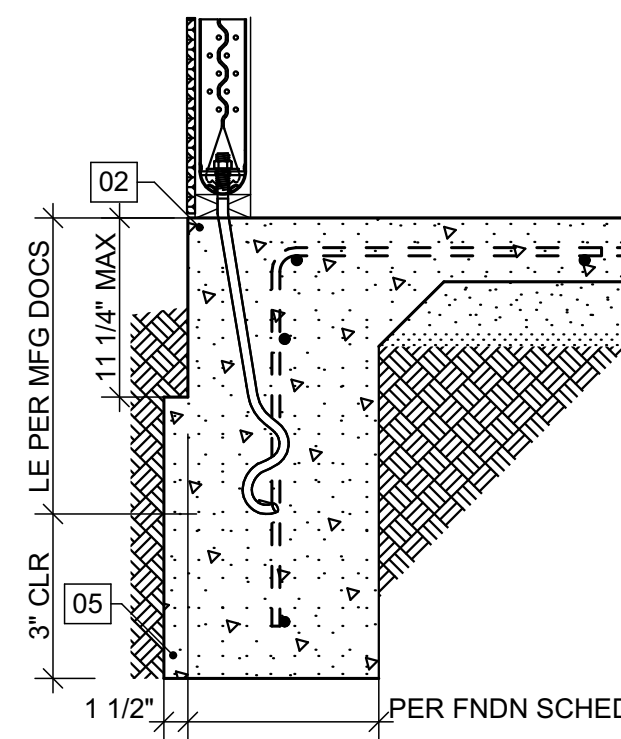
6 CONC-SOG EXTERIOR SAND BASE
NOT TO SCALE



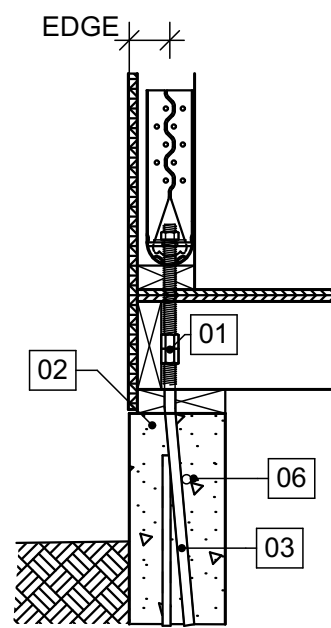
A SLAB ON GRADE - PLAN VIEW



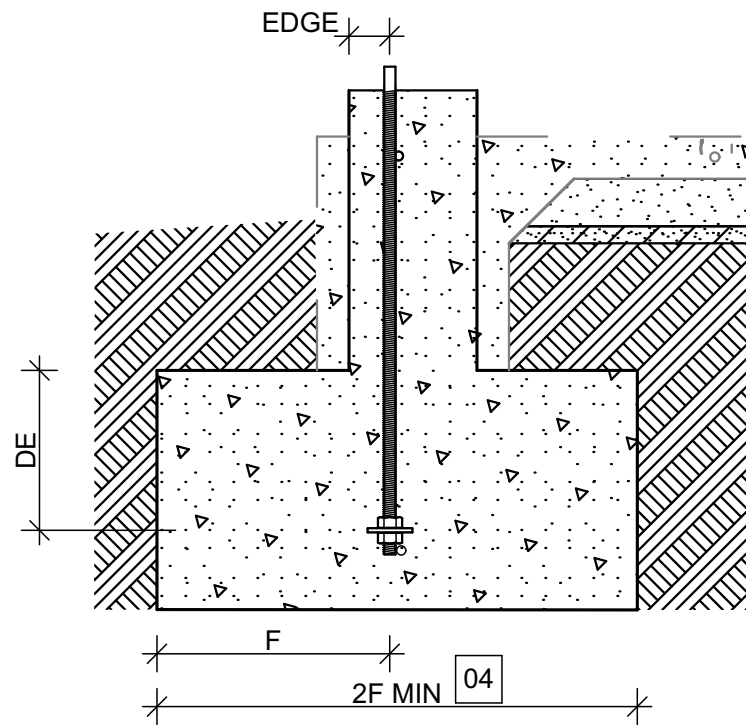
B RAISED FOUNDATION - PLAN VIEW



C SLAB ON GRADE - SSTB ANCHOR



D RAISED FOUNDATION - SSTB ANCHOR



E RAISED OR SLAB ON GRADE FNDN W/WALL-THREAD ANCHOR

GENERAL NOTES -

- G01 REVIEW HOLDOWN INSTALLATION INSTRUCTIONS FOR ADDITIONAL DETAILS
G02 FOR RETROFIT CONDITIONS, REFER TO APPLICABLE FOOTING DETAIL FOR ADDITIONAL INFORMATION
G03 HOLDOWN ANCHORS TO BE TIED IN-PLACE PRIOR TO FOUNDATION INSPECTION AND POUR

KEYNOTES -

- 01 CNV COUPLER NUT
02 MIN 1 3/4" BETWEEN ANCHOR BOLT CENTER & FOUNDATION EDGE
03 ROTATE SSTB ANCHOR BOLT A MIN OF 45° FROM PARALLEL CONDITION WITH STEM WALL
04 2F MIN IN BOTH DIRECTIONS, CENTERED @ ANCHOR BOLT
05 1 1/2" 'POP-OUT' REQUIRED AT EXT SOG SSTB FOOTING LOCATIONS. EXTEND A MIN LENGTH OF LE IN EACH DIRECTION. CENTER @ ANCHOR BOLT
06 UNO PER FOUNDATION PLAN, 1 - #4 3 TO 5" FROM TOP OF STEM

HOLDOWN	MIN POST DEPTH	ANCHOR BOLT @ SOG	ANCHOR BOLT @ RAISED FNDN	EDGE MIN	CE MIN	DE MIN @ SOG DETAIL 'C'	DE MIN @ RAISED FNDN	F (NOTE 1)
HDU2-SDS2.5	3"	SSTB20	SSTB24	1 3/4"	5"	12 5/8"	12 5/8"	NA
HDU4-SDS2.5	3"	SB 5/8 X 24	SB 5/8 X 24	1 3/4"	5"	16 5/8"	6"	NA
HDU5-SDS2.5	3"	SB 5/8 X 24	SB 5/8 X 24	1 3/4"	6"	20 5/8"	6"	NA
HDU8-SDS2.5	4.5"	SSTB28	SSTB28	1 3/4"	6"	24 7/8"	6"	NA
HDU11-SDS2.5	7.25"	PAB8	PAB8	2 1/2"	12"	11"	11"	16.5"
HDU14-SDS2.5	7.25" OR 6X6	PAB8	PAB8	2 1/2"	11"	11"	11"	16.5"

NOTES -
1 WHERE DETAIL 'E' APPLIES

7 CONC-HOLDOWNS
NOT TO SCALE



DATE: 4/9/2020

DATES

1/3/2020 INITIAL
03/03/2020 (E) FENCE SUBMITTAL
03/03/2020 DART RESUBMITTAL
03/18/2020 RESUBMITTAL

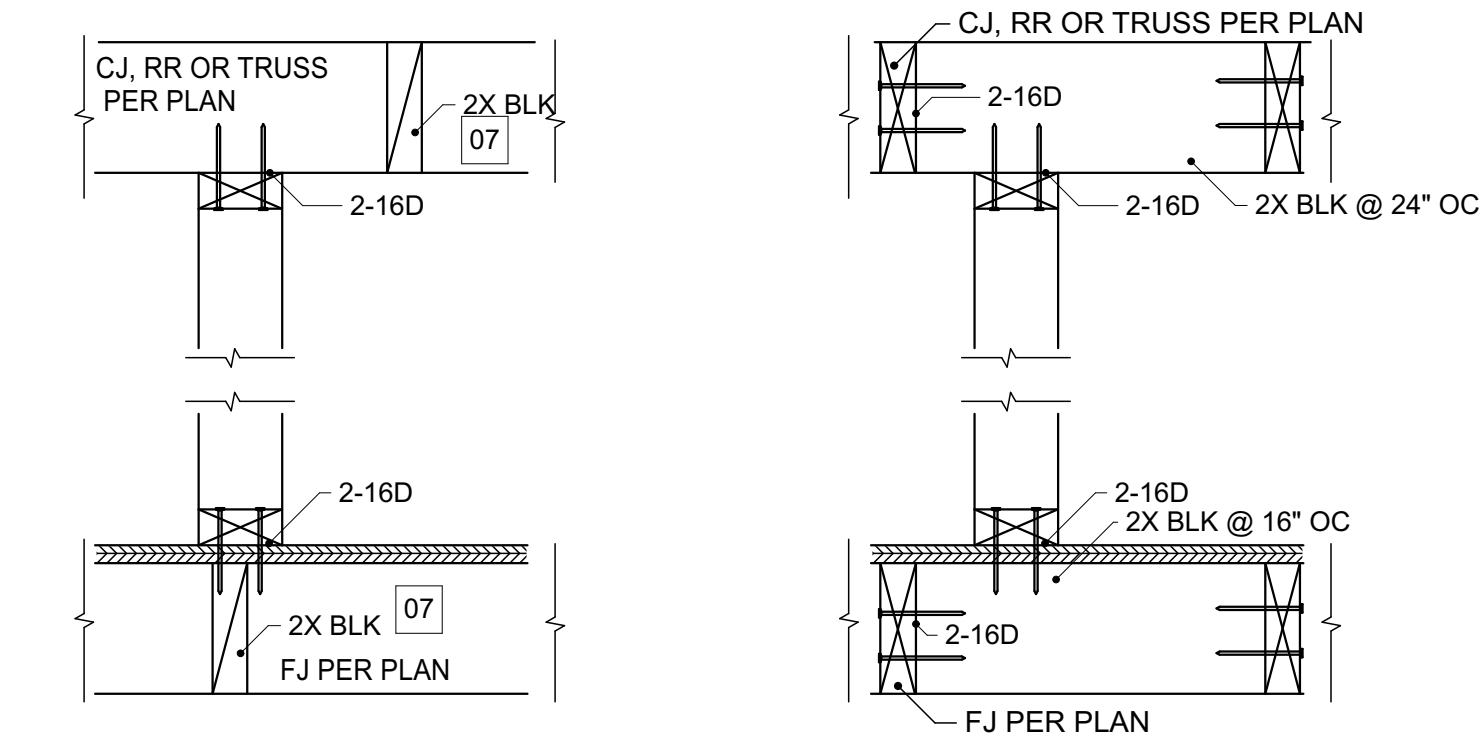
SCALE AS NOTED

CREATED BY: WDS

SHEET

CONCRETE DETAILS

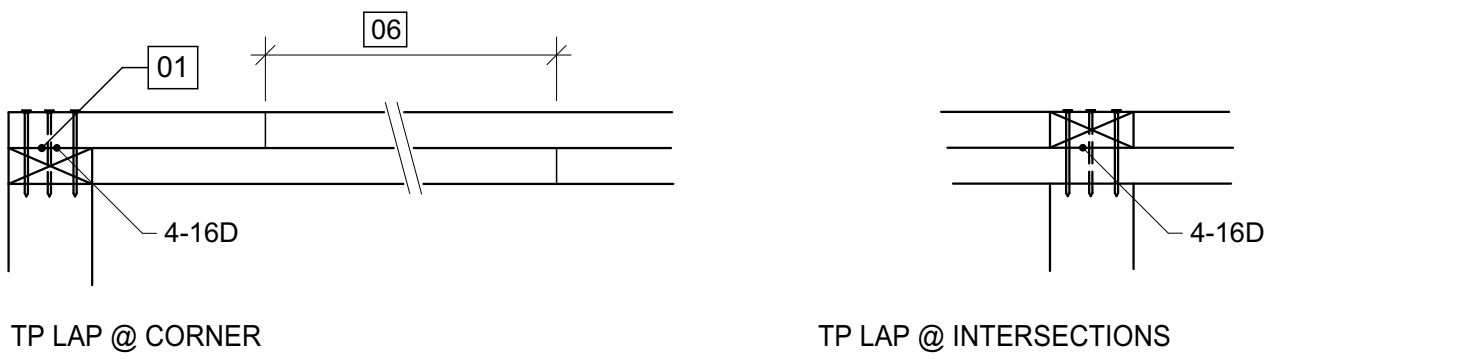
S-502



STUD WALL CONNECTIONS AT CORNERS & INTERSECTIONS

NON-BEARING PARTITION PERP TO JOISTS

NON-BEARING PARTITION PARALLEL TO JOISTS



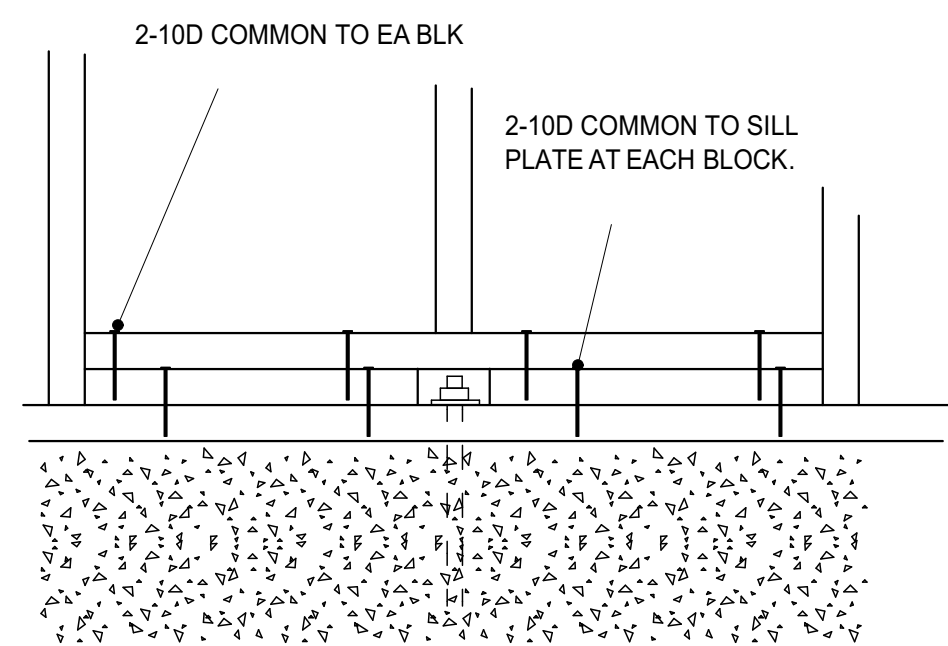
GENERAL NOTES -

- 51 UNLESS NOTED OTHERWISE, ALL CONNECTIONS PER 'FRMNG-NAILING SCHEDULE' & 'FRMNG-SHEAR WALL &
SHEATHING' AS APPLICABLE
52 UNO, WALL STUDS TO BE SPACED AT 16" OC
53 BALLOON FRAME GABLE WALLS AT VAULTED AREAS
54 BLK BENEATH ALL POSTS. ALLOW FOR "FULL" BEARING OF POST BASE

KEY NOTES -

- 01 PROVIDE PLATE OVERLAP AT CORNERS & INTERSECTIONS, OR LSTA24 ACROSS BREAK IF LAP NOT POSSIBLE
02 2X BLOCKING @ 16" OC BETWEEN JOISTS
03 BLOCK PARALLEL TO JOISTS OVER FULL LENGTH OF WALL
04 MIN 3" LAP WHERE PARALLEL JOISTS OCCUR OVER SUPPORT
05 MAX. OFFSET BETWEEN BEARING PARTITION AND SUPPORT TO BE NO GREATER THAN THE JOIST DEPTH, OR
06 1/2 ROWS OF BLK ALK @ 16" TP & 1" HWY
07 BREAKS IN UPPER & LOWER TOP PLATES TO BE OFFSE BY AT LEAST 48". STRAP ACROSS JOISTS WITH LSTA18
08 WHERE MIN OFFSET NOT POSSIBLE. DBL TP CONNECTION PER 'FRMNG-NAILING SCHEDULE'
09 BLK ALK JOIST @ 8-FT OC WHERE JOIST HEIGHT TO WIDTH RATIOS EXCEED 6

1 FRMNG-WALL CONNECTIONS
NOT TO SCALE



NOTES:

01 FOR USE WHERE STUDS FALL OVER ANCHOR BOLTS.

5 FRMNG-CUTTING & NOTCHING
NOT TO SCALE

6 FRMNG-OVER ANCHOR BOLT
NOT TO SCALE

7 FRMNG-NAILING SCHEDULE
NOT TO SCALE

CATEGORY	CONNECTION	NAILING
FOUNDATION	FLOOR JOIST TO SILL PLATE OR GIRDER, TOENAIL	(3) - 8D
FOUNDATION	BLOCKING OR RIM JOIST TO FLOOR JOIST, END NAIL	(2) - 16D
FOUNDATION	BLOCKING OR RIM JOIST TO SILL PLATE, TOENAIL	8D @ 6" OC
FOUNDATION	BLOCKING OR RIM JOIST TO SILL PLATE AT SHEAR WALL 'FRMNG-SHEAR WALL & SHEATHING'	PER DETAIL
FOUNDATION	FLOOR OPENINGS 'FRMNG-OPENING ROOF CLNG FLOOR'	PER DETAIL
FOUNDATION	SUB-FLOOR SHEATHING 'FRMNG-SHEAR WALL & SHEATHING'	PER DETAIL
WALL	CORNERS AND INTERSECTIONS 'FRMNG-WALL CONNECTIONS'	PER DETAIL
WALL - BP	BOTTOM PLATE TO JOIST OR BLOCKING, FACE NAIL	16D @ 8" OC
WALL - OPEN	DOOR & WINDOW OPENINGS 'FRMNG-OPENING HEADERS'	PER DETAIL
WALL - PLY	WALL SHEATHING 'FRMNG-SHEAR WALL & SHEATHING'	PER DETAIL
WALL - POST	POST TO BP, TP, OR SP IF HARDWARE NOT SPECIFIED BLK WHERE NEEDED TO PROVIDE FOR FULL BEARING	(4) - 16D END NAIL OR 2-LTP4 OR 2-A34
WALL - STD	STUD TO BOTTOM PLATE OR TOP PLATE(S) IF 3X BOTTOM PLATE	(2) - 16D END NAIL OR (4) - 8D TOENAIL (2) - 20D END NAIL OR (4) - 8D TOENAIL
WALL - STD DBL	DOUBLE STUDS, FACE NAIL	16D @ 24" OC STAGGERED
WALL - SW	WALL SHEAR WALL 'FRMNG-SHEAR WALL & SHEATHING'	PER DETAIL
WALL - TP	DOUBLE TOP PLATES, FACE NAIL	16D @ 16" OC STAGGERED
WALL - TP	DOUBLE TOP PLATE LAPS & INTERSECTIONS 'FRMNG-WALL CONNECTIONS'	PER DETAIL
CEILING - C-J	CEILING JOIST TO TOP PLATE, TOENAIL	(3) - 8D
CEILING - C-J	CEILING JOIST LAPS AT PARTITIONS, FACE NAIL	(3) - 16D
CEILING - C-J	CEILING JOIST TO PARALLEL RAFTER, FACE NAIL	(3) - 16D
CEILING - OPEN	CEILING OPENINGS 'FRMNG-OPENING ROOF CLNG FLOOR'	PER DETAIL
CEILING - BLK	BLOCKING OR RIM JOIST TO CEILING JOIST, END NAIL	(2) - 16D
CEILING - BLK	BLOCKING OR RIM JOIST TO TOP PLATE, TOENAIL	8D @ 6" OC
CEILING - BLK	BLOCKING OR RIM JOIST TO TOP PLATE AT SHEAR WALL 'FRMNG-SHEAR WALL & SHEATHING'	PER DETAIL
ROOF - PLY	ROOF SHEATHING 'FRMNG-SHEAR WALL & SHEATHING'	PER DETAIL
ROOF - OPEN	ROOF OPENINGS 'FRMNG-OPENING ROOF CLNG FLOOR'	PER DETAIL
ROOF - RR	RAFTER TO TOP PLATE OR BEAM, TOENAIL	(3) - 8D
ROOF - BLK	RAFTER TO BLOCKING, END NAIL	(2) - 16D
ROOF - BLK	BLOCKING TO TOP PLATE OR BEAM, TOENAIL	8D @ 6" OC
ROOF - BLK	BLOCKING AT SHEAR WALL 'FRMNG-SHEAR WALL & SHEATHING'	PER DETAIL
ROOF - HR	RAFTER TO HIP RAFTER, END NAIL	(3) - 16D
ROOF - RB	RAFTER TO RIDGE BOARD, END NAIL	(3) - 16D
NOTES -		
01	HALSTEEL, TRUESPEC (COLOR-CODED) NAILS OR EQUIVALENT TO BE USED	
02	NAIL DIAMETERS DEFINED AS: 6D (0.099), 8D (0.131), 10D (0.148), 16D (0.162), 20D (0.192)	
03	MINIMUM FACE AND END NAIL PENETRATION INTO FRAMING TO BE 1-1/2"	
04	MINIMUM TOENAIL PENETRATIONS INTO FRAMING TO BE 1-1/8", INSTALLED @ A 30° ANGLE FROM VERTICAL, & STARTED @ APPROXIMATELY 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER EDGE. UNO, TOENAILS DIAMETER ≤ 8D (0.131)	
05	MINIMUM JOIST BEARING TO BE 1-1/2". MINIMUM GIRDER BEARING TO MATCH WIDTH OF LUMBER	
06	NAILING SCHEDULE PROVIDES MINIMUM NAILING REQUIREMENTS; MORE STRINGENT REQUIREMENTS INDICATED WITHIN THESE DOCUMENTS SUPERSEDE	

7 FRMNG-NAILING SCHEDULE
NOT TO SCALE

FN - FRAMING NOTES

- GENERAL**
ALL MATERIALS AND EQUIPMENT TO BE INSTALLED PER THE APPLICABLE PROVISIONS OF THESE DOCUMENTS AND THE MANUFACTURERS' INSTALLATION INSTRUCTIONS. UNO
REFER TO DETAIL SHEETS FOR TYPICAL CONSTRUCTION REQUIREMENTS. DETAIL DRAWING LOCATIONS CAN BE FOUND @ S001
- LUMBER**
UNO, LUMBER TO BE DOUGLAS FIR-LARCH
LUMBER GRADING AS FOLLOWS, UNO:
2X4: STD OR BTR
2X6 AND LARGER: #2 OR BTR
4X AND LARGER: #1
TIMBERSTRAND (LSL): ILEVEL LSL 1.55E
MICROLLAM (LVL): ILEVEL LVL 1.9E
PARALLAM (PSL): ILEVEL PSL 2.0E
PLYWOOD & OSB: APA SHEATHING RATED STRUCTURAL 1, EXPOSURE 1
LUMBER MOISTURE CONTENT TO BE LESS THAN 19% AT TIME OF INSTALLATION
MEMBERS EXPOSED TO VIEW: SELECT FOR BEST APPEARANCE AVAILABLE IN GRADE SPECIFIED.
REMOVE ALL STAINS, STAMPS, OR GOUGES PRIOR TO INSTALLATION
- NAILING**
REFER TO FRMNG-NAILING SCHEDULE DETAIL FOR MIN NAILING REQUIREMENTS
HALSTEEL, TRUESPEC (COLOR-CODED) NAILS OR EQUIVALENT TO BE USED
NAIL DIAMETERS DEFINED AS: 6D (0.099), 8D (0.131), 10D (0.148), 16D (0.162), 20D (0.192)
NAILS INTO TREATED LUMBER TO BE RATED FOR USE (ASTM A153, CLASS D)
UNO, **TOENAILING**, @ LOCATIONS ALLOWED BY 'FRMNG-NAILING SCHEDULE' **NOT TO EXCEED 8D NAIL DIAMETER**
- CONNECTORS**
ALL TIMBER CONNECTORS ARE TO BE GALVANIZED, OR PAINTED WITH CORROSION RESISTANT POLYMER PAINT
UNO, BOLTED CONNECTIONS FOR WOOS TO BE WITH ASTM A307 TYPE BOLTS
UNO, DRILL HOLES IN WOOD FOR BOLTS 1/16" LARGER THAN THE NOMINAL SIZE OF THE BOLT
PROVIDE 6" BOLTS WITH STANDARD CUT WASHERS UNDER HEADS AND/OR NUTS WHERE IN CONTACT WITH WOOD
ALL SHEET METAL FRAMING CONNECTORS SHOWN ON THE PLANS ARE TO BE STRONG TIE CONNECTORS AS MANUFACTURED BY THE SIMPSON CO. OR EQUAL. UNO, ALL CONNECTOR HOLES ARE TO BE UTILIZED
NAILS INTO TREATED LUMBER TO BE RATED FOR USE (ASTM A153, CLASS D)
- LUMBER @ CONCRETE OR MASONRY**
USE DOUGLAS FIR PRESSURE IMPREGNATED LUMBER WITH AN APPROVED PRESERVATIVE FOR SILL PLATES RESTING ON OR AGAINST CONCRETE OR MASONRY
TREAT BOTTOM 6 INCHES OF POSTS THAT BEAR ON CONCRETE OR CONCRETE BLOCK WITH A SAFE PRESERVATIVE THAT DOES NOT DISCOLOR THE WOOD
WHERE STUD WALL TERMINATES AT A CONCRETE OR MASONRY WALL, FASTEN THE LAST STUD TO THE WALL WITH ø 3/8" ANCHOR AT THE TOP, BOTTOM, AND MID HEIGHT OF THE STUD. MAXIMUM VERTICAL SPACING OF ANCHORS SHALL BE 6'0". ANCHORS CAN BE POURED IN PLACE OR RETROFITTED WITH EMBEDMENT. LUMBER TO BE TREATED
NAILS INTO TREATED LUMBER TO BE RATED FOR USE (ASTM A153, CLASS D)
- BLOCKING**
SOLID BLOCK ALL 2X JOISTS AND RAFTERS AT POINTS OF BEARING. WHERE THE JOIST OR RAFTER SPAN EXCEEDS EIGHT (8) FEET, PROVIDE WOOD CROSS BRIDGING, NOT LESS THAN 2 INCHES BY 3 INCHES NOMINAL. THE DRAWINGS ARE THOSE OF ILEVEL WEYERHAEUSER. OTHER MANUFACTURERS' JOISTS WHICH ARE EQUAL TO THOSE OF ILEVEL WEYERHAEUSER ARE ACCEPTABLE WITH THE APPROVAL OF THE STRUCTURAL ENGINEER
MULTIPLE BUILT-UP MICROLLAM (LVL) SECTIONS SHALL BE NAILED OR BOLTED TOGETHER PER SPECIFICATIONS PROVIDED BY STANDARD ILEVEL WEYERHAEUSER.
ALL PRODUCTS SHALL CONFORM WITH NATIONAL EVALUATION SERVICE INC. (NES) REPORT NO. NER-125 AND NER-292
TJI JOISTS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS
- GLULAM BEAM**
PROVIDE GLUED LAMINATED BEAMS OF THE SIZE AND CAMBER SHOWN ON THE PLANS. USE A FABRICATOR THAT IS A MEMBER OF THE AITC. FURNISH THE OWNER WITH AN AITC CERTIFICATE UPON COMPLETION OF THE BEAMS. ALL LUMBER TO BE DOUGLAS FIR. USE LAMINATIONS RESULTING FROM USAGE OF 2" NOMINAL THICK MATERIAL. LAMINATIONS TO CONFORM TO COMBINATION 24F V8. APPEARANCE TO BE INDUSTRIAL GRADE. USE EXTERIOR TYPE GLUE. FABRICATION OF ALL GLUED LAMINATED BEAMS TO CONFORM TO VOLUNTARY PRODUCT STANDARD PS 56 73
- ENGINEERED LUMBER**
PARALLAM (PSL), LAMINATED STRAND LUMBER (LSL), AND LAMINATED VENEER LUMBER (LVL) DESIGNATIONS ON THE DRAWINGS ARE THOSE OF ILEVEL WEYERHAEUSER. OTHER MANUFACTURERS' JOISTS WHICH ARE EQUAL TO THOSE OF ILEVEL WEYERHAEUSER ARE ACCEPTABLE WITH THE APPROVAL OF THE STRUCTURAL ENGINEER
MULTIPLE BUILT-UP MICROLLAM (LVL) SECTIONS SHALL BE NAILED OR BOLTED TOGETHER PER SPECIFICATIONS PROVIDED BY STANDARD ILEVEL WEYERHAEUSER.
ALL PRODUCTS SHALL CONFORM WITH NATIONAL EVALUATION SERVICE INC. (NES) REPORT NO. NER-125 AND NER-292
TJI JOISTS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS
- ROOF FRAMING & TRUSSES**
INSTALL ROOF TRUSSES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS

8 FN-FRAMING NOTES
NOT TO SCALE

1825 STATE STREET STE 102
SANTA BARBARA, CA 93101
T: 805.845.6601
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PROJECT

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CLIENT

DAVID MARCHETT
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SANTA BARBARA,

SHEET INDEX

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G-003	ENERGY ANALYSIS
G-004	GREEN CODE
G-005	GENERAL NOTES
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S-001	GENERAL
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S-501	CONCRETE DETAILS
S-502	CONCRETE DETAILS
S-503	FRAMING DETAILS
S-504	FRAMING DETAILS
S-505	FRAMING DETAILS
S-506	SW & SHEATHING DETAILS
P-101	PLUMBING PLAN
M-101	MECH PLAN



DATE: 4/9/2020

DATES

1/3/2020	INITIAL
03/03/2020	(E) FENCE SUBMITTAL
03/03/2020	DART RESUBMITTAL
03/18/2020	RESUBMITTAL

SCALE AS NOTED

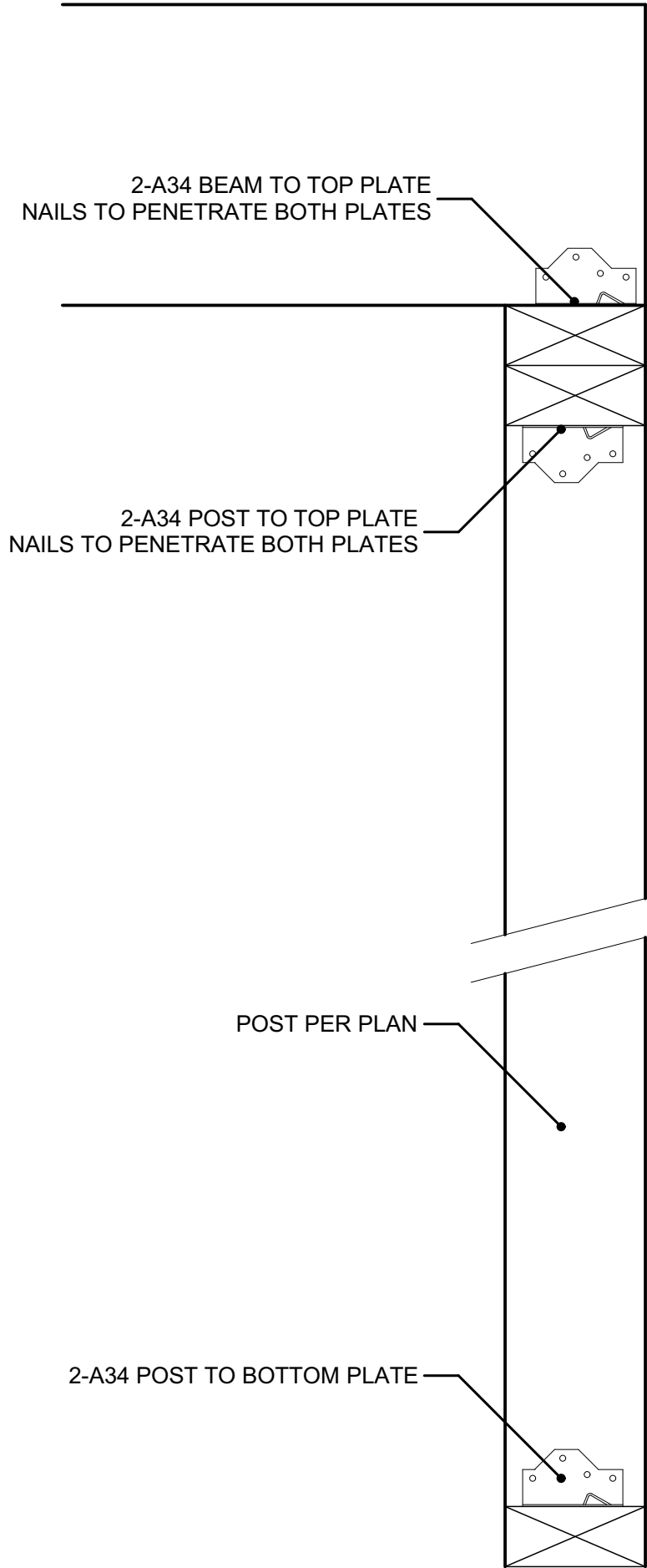
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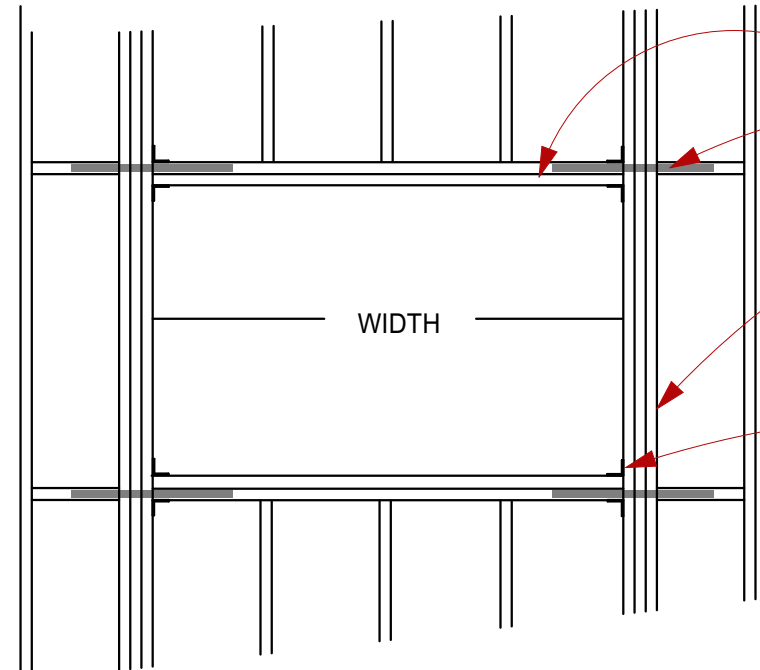
FRAMING DETAILS

S-503

SHEET INDEX	
G-001	GENERAL AND SITE PLAN
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G-003	ENERGY ANALYSIS
G-004	GREEN CODE
G-005	GENERAL NOTES
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A-601	SCHEDULES
S-001	GENERAL
S-101	FOUNDATION/1ST STORY FRAMING PLAN
S-501	CONCRETE DETAILS
S-502	CONCRETE DETAILS
S-503	FRAMING DETAILS
S-504	FRAMING DETAILS
S-505	FRAMING DETAILS
S-506	SW & SHEATHING DETAILS
P-101	PLUMBING PLAN
M-101	MECH PLAN



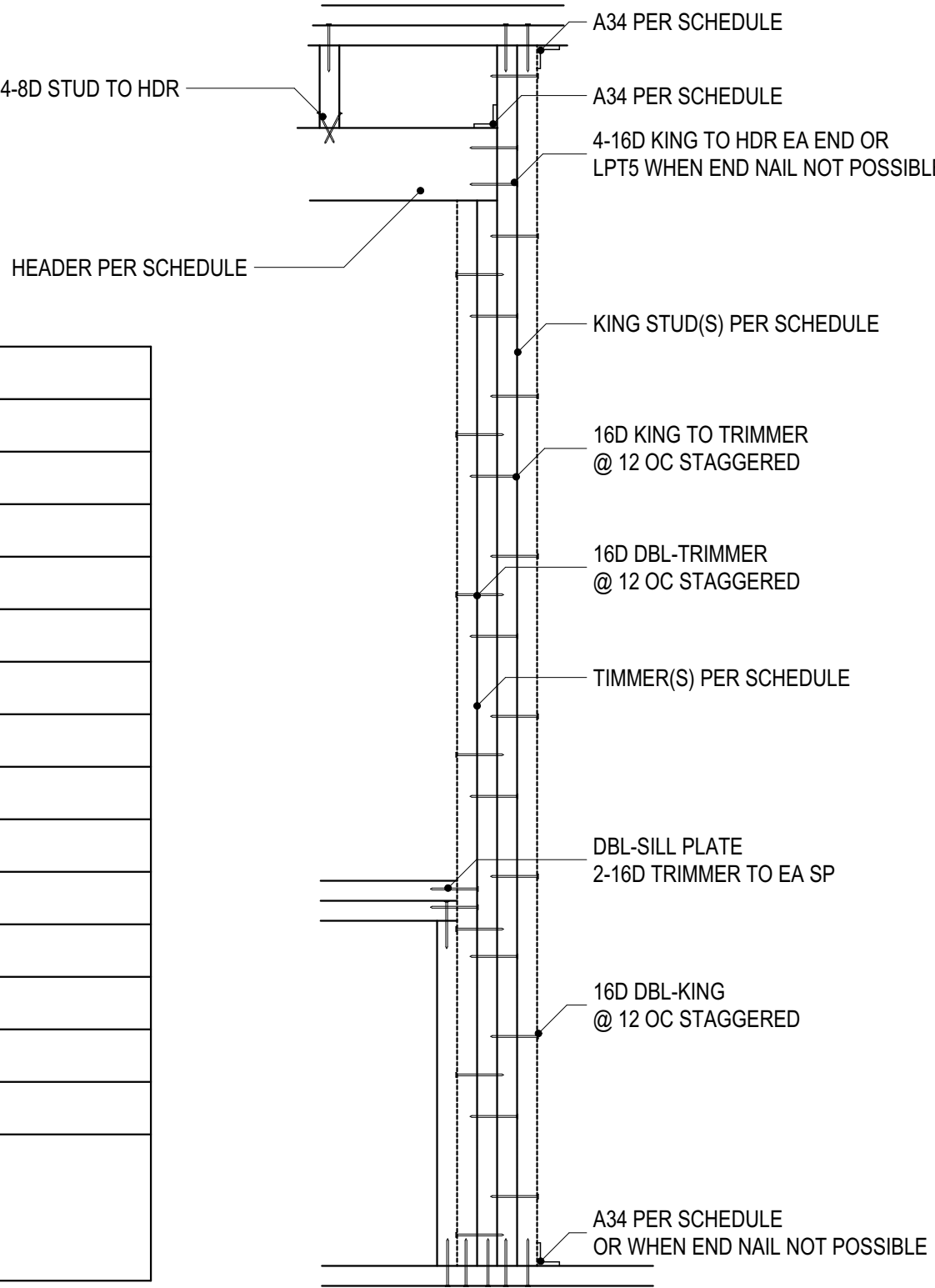
3 FRMNG-PST/BM CONNECTIONS @ WALL
NOT TO SCALE



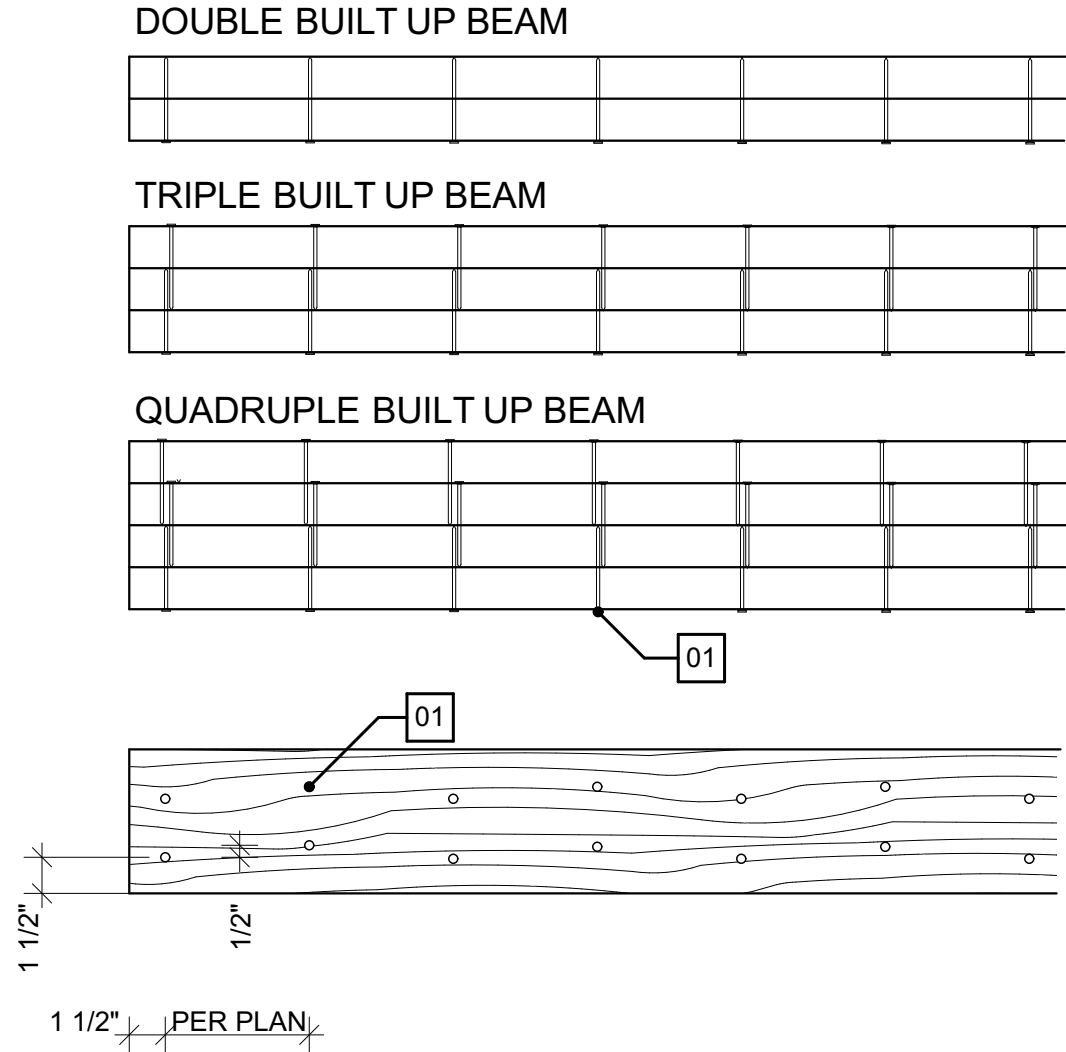
WIDTH	2X HEADERS REQ. EA. SIDE	2X TRIMMERS REQ. EA. SIDE	A35 REQ.
24"	1	1	NO
32"	2	2	NO
48"	2	2	YES
64"	2	3	YES
80"	2	4	YES

4 FRMNG-OPENING ROOF CLNG FLOOR
NOT TO SCALE

HEADER SCHEDULE						
1-STORY CONDITION						
ID	MAX SPAN	HEADER SIZE	TRIMMER(S)	KING(S)	A34	NOTES
HDR1	4-FT	4X4	1	1	NA	
HDR2	6-FT	4X6	1	1	NA	
HDR3	8-FT	4X8	1	1	NA	
HDR4	10-FT	4X10	2	1	NA	
HDR5	12-FT	4X12	2	2	NA	
NOTES -						
1 UNO PER FRAMING PLAN, HEADER SIZES TO BE AS SPECIFIED ABOVE						



6 FRMNG-OPENINGS
NOT TO SCALE



NAILING PATTERN

GENERAL NOTES-

51 BUILT-UP BEAM PER PLAN

KEYNOTES-

01 NAILING SIZE AND OC SPACING PER PLAN

8 FRMNG-BUILT UP BEAM NAILING
NOT TO SCALE



DATE: 4/9/2020

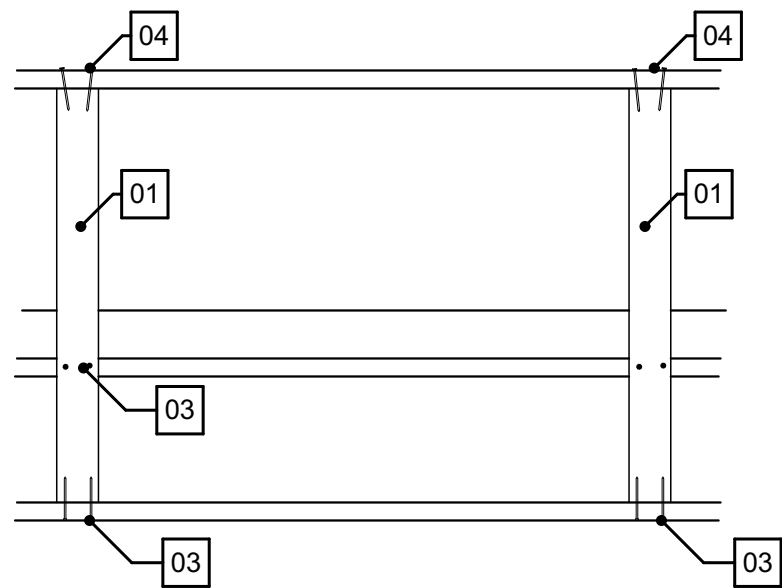
DATES	
1/3/2020	INITIAL
03/03/2020	(E) FENCE SUBMITTAL
03/03/2020	DART RESUBMITTAL
03/18/2020	RESUBMITTAL

SCALE AS NOTED

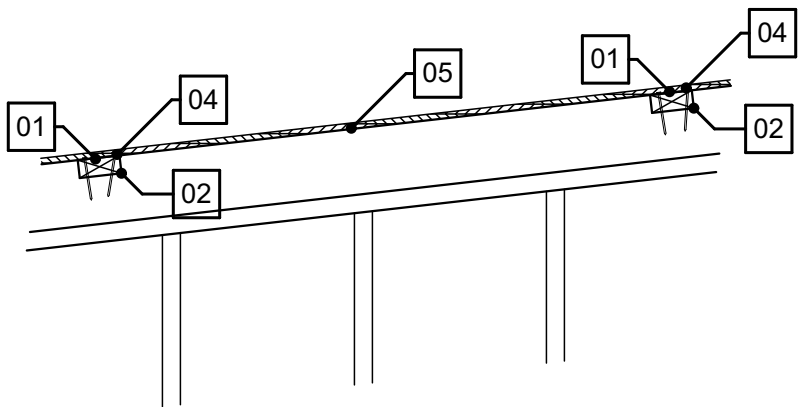
CREATED BY: WDS

SHEET
FRAMING DETAILS

SHEET INDEX	
G-001	GENERAL AND SITE PLAN
G-002	ENERGY ANALYSIS
G-003	ENERGY ANALYSIS
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A-101	PLAN ELEV SECT
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S-501	CONCRETE DETAILS
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S-504	FRAMING DETAILS
S-505	FRAMING DETAILS
S-506	SW & SHEATHING DETAILS
P-101	PLUMBING PLAN
M-101	MECH PLAN



PLAN VIEW

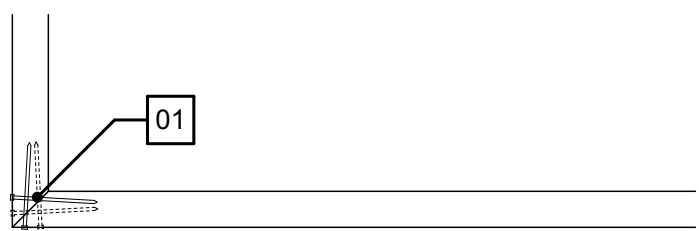


ELEVATION

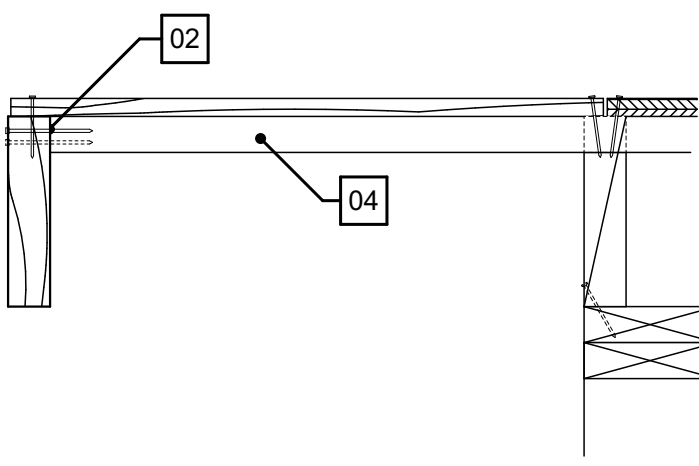
KEYNOTES -

- 01 OUTLOOKERS - SIZE & SPACING PER FRAMING PLAN
- 02 NOTCH RIM JOIST TO ALLOW FOR INSTALLATION
- 03 2-16D (GALVANIZED CASEMENT NAILS) FASCIA TO OUTLOOKER
- 04 2-16D RR TO OUTLOOKER
- 05 ROOF PITCH & DETAILS PER ARCHITECTURAL PLANS

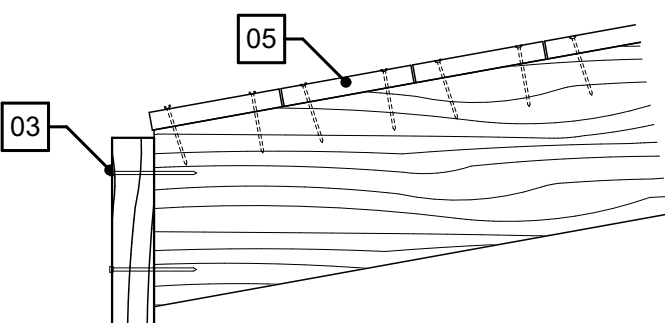
3 FRMNG-OUTLOOKERS
NOT TO SCALE



TYPICAL CORNER CONDITION



TYPICAL GABLE CONDITION



TYPICAL EAVE CONDITION

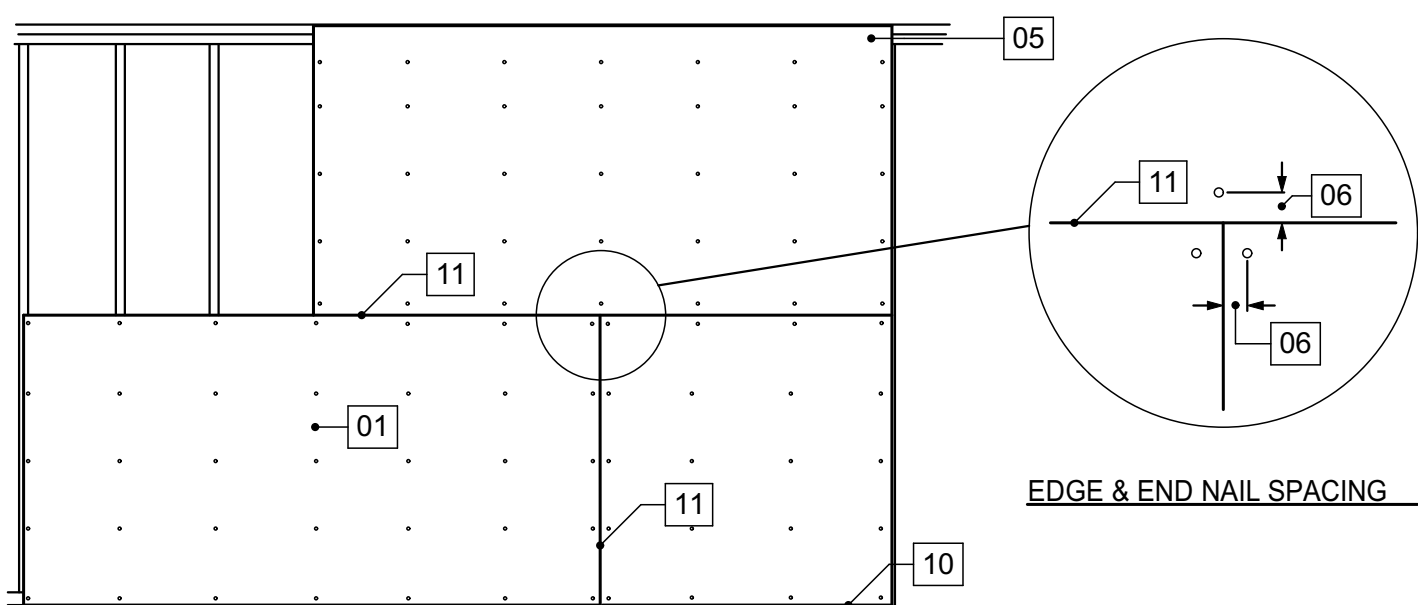
GENERAL NOTES -

- 51 DRAWING REPRESENTATIVE AND IS INTENDED TO ILLUSTRATE STRUCTURAL CONNECTIONS. ACTUAL FASCIA SIZE & EAVE DETAIL MAY DIFFER. REFER TO ARCHITECTURAL DETAILS

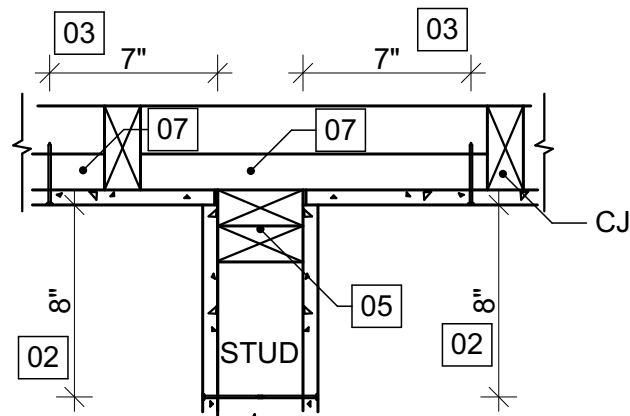
KEYNOTES -

- 01 2-16D (GALVANIZED CASEMENT NAILS) EA WAY
- 02 3-16D (GALVANIZED CASEMENT NAILS) FASCIA TO OUTLOOKER
- 03 2-16D (GALVANIZED CASEMENT NAILS) FASCIA TO RR
- 04 OUTLOOKER PER "FRMNG-OUTLOOKERS"
- 05 ROOF PITCH & STARTER BOARD DETAILS PER ARCHITECTURAL PLANS

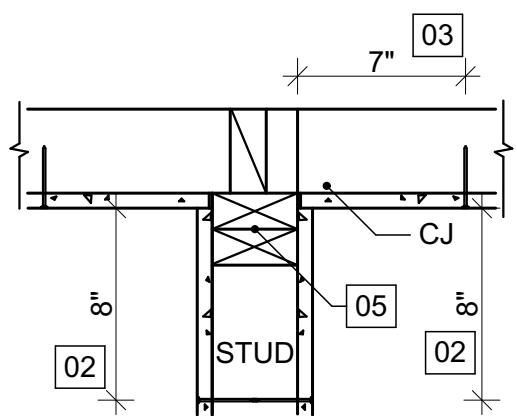
4 FRMNG-FASCIA
NOT TO SCALE



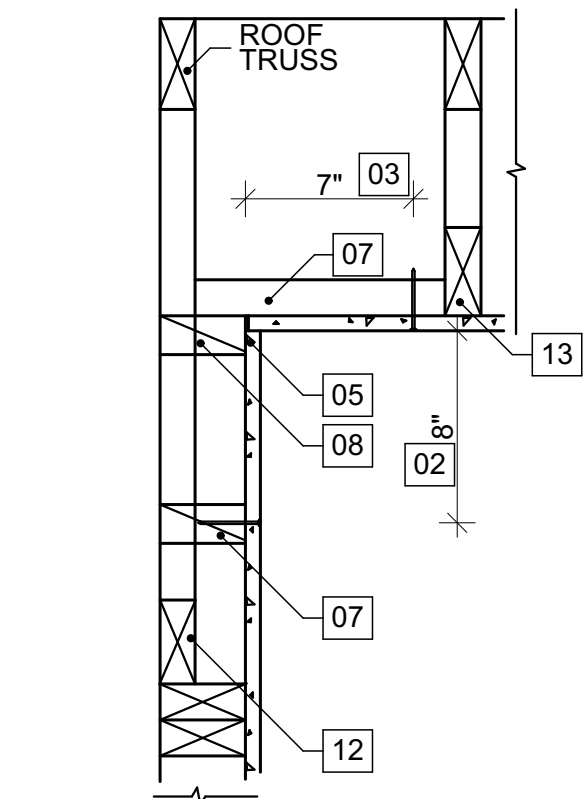
GYPSUM PANEL NAILING



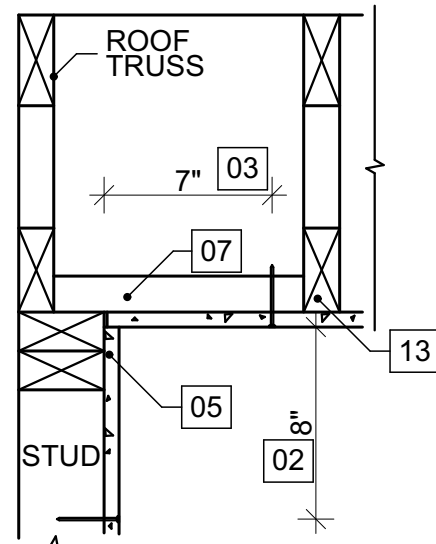
CEILING NAILING @ PARTITION
CJ PARALLEL TO WALL



CEILING NAILING @ PARTITION
CJ PERPENDICULAR TO WALL



CEILING NAILING @ SCISSOR TRUSS
FLAT BOTTOM GABLE TRUSS



CEILING NAILING @ SCISSOR TRUSS
RAKED BOTTOM GABLE TRUSS

GENERAL NOTES -

- 51 REFER TO GYPSUM ASSOCIATION'S INSTALLATION GUIDE (GA-216-YY) @ WWW.GYPSUM.ORG FOR ADDITIONAL INFORMATION
- 52 FRAMING PER STRUCTURAL PLANS
- 53 FASTENERS NOT TO FRACTURE FACE PAPER
- 54 7/8" MIN NAIL PENETRATION INTO WOOD
- 55 5/8" MIN SCREW PENETRATION INTO WOOD OR 1/4" THRU METAL
- 56 "STACKED" PANELS SHALL BE LOCATED SO THAT VERTICAL JOINTS DO NOT FALL ON THE SAME STUD
- 57 PANELS SHALL BE LOCATED SO THAT NO JOINT ALIGNS WITH AN OPENING EDGE
- 58 JOINTS ON OPPOSITE SIDES OF PARTITIONS SHALL NOT OCCUR ON THE SAME STUD
- 59 PANELS SHALL BE APPLIED FIRST TO CEILINGS AND THEN TO WALLS
- 60 12" OC MAX CJ SPACING WHERE 1/2" CEILING GREENBOARD IS TO BE INSTALLED
- 61 1-LAYER OF 5/8" TYPE X MIN REQUIRED @ GARAGE CEILING, TO MEET FIRE SEPARATION REQUIREMENT WHEN, HABITABLE SPACE IS ABOVE & FLOOR/CEILING JOISTS ARE MANUFACTURED L-JOISTS
- 62 REFER TO ARCHITECTURAL PLANS AND GYPSUM ASSOCIATION'S FIRE DESIGN MANUAL (GA-600-YYYY) @ WWW.GYPSUM.ORG FOR FIRE SEPARATION WALL DETAILS
- 63 WHERE RIGID FURRING CHANNELS ARE USED WITH WOOD FRAMING, CHANNELS SHALL BE SPACED NOT MORE THAN 24 OC & SHALL BE APPLIED AT RIGHT ANGLES TO WALL & CEILING FRAMING MEMBERS. CHANNELS SHALL BE LOCATED NOT MORE THAN 2 IN FROM THE FLOOR & NOT MORE THAN 6 IN FROM THE WALL/CEILING INTERSECTION. CHANNELS SHALL BE ATTACHED THROUGH ALTERNATING FLANGES TO EACH FRAMING MEMBER WITH EITHER 6D NAILS, 1 7/8 IN LONG, OR 1 1/4 IN TYPE S OR W DRYWALL SCREWS

KEYNOTES -

- 01 SPACING ALONG STUD OR JOIST PER GYPSUM PANEL NAILING TABLE
- 02 8" TO FIRST ROW OF WALL NAILS, 11" TO 12" FOR SCREWS
- 03 7" TO FIRST ROW OF CEILING NAILS, 11" TO 12" FOR SCREWS
- 04 DO NOT NAIL UNDERLYING PANEL. HOLD PANEL BACK 1/8" TO ALLOW FOR EXPANSION
- 05 DO NOT NAIL INTO TOP PLATES
- 06 3/8" MIN SPACING FROM FASTENER TO EDGES OR ENDS
- 07 BLOCKING AT REQ SPACING
- 08 FIRE BLOCK
- 09 ADD STUD, OR BLOCKING AT REQ SPACING
- 10 MIN 1/4" CLEARANCE TO FLOOR
- 11 PANELS SHALL BE IN CONTACT WITH EACH OTHER, BUT NOT FORCED
- 12 GABLE TRUSS LEVEL BOTTOM CHORD
- 13 TRUSS RAKED BOTTOM CHORD



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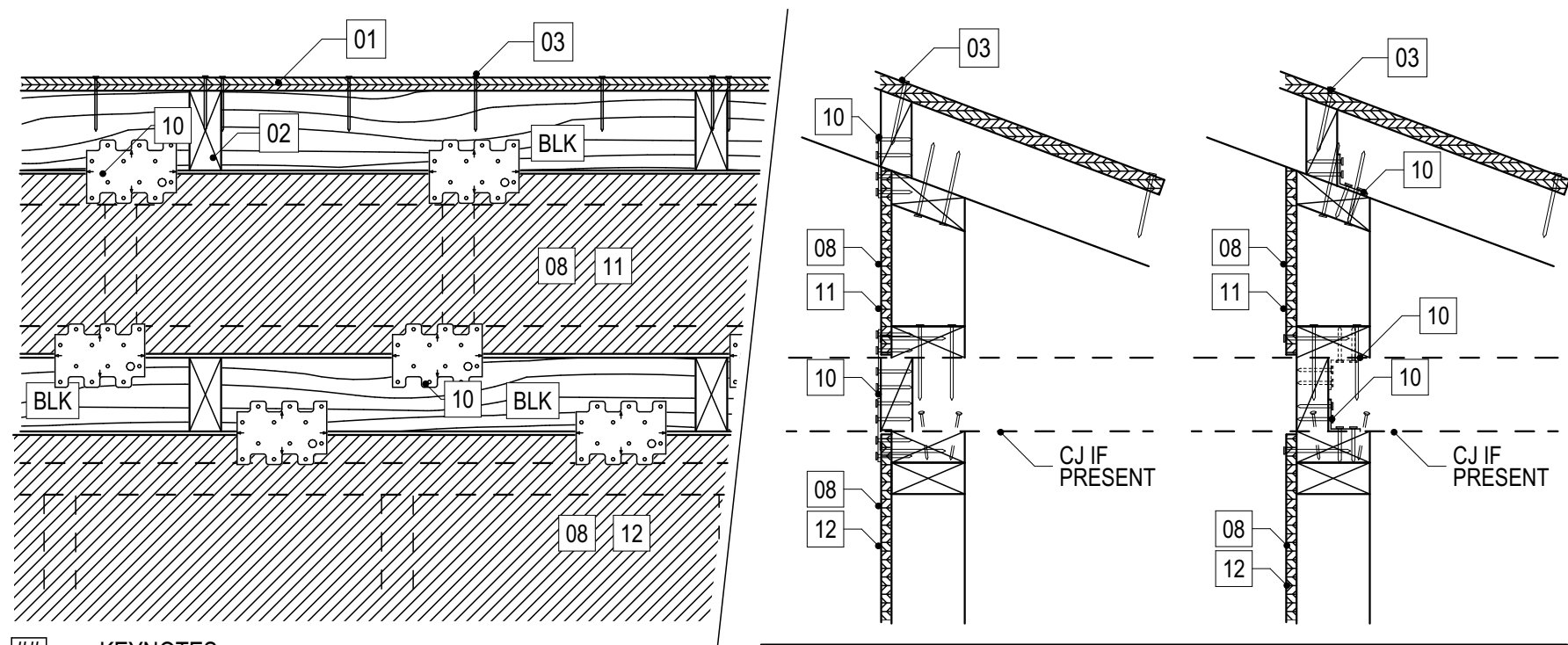
SCALE AS NOTED

CREATED BY: WDS

SHEET
FRAMING DETAILS

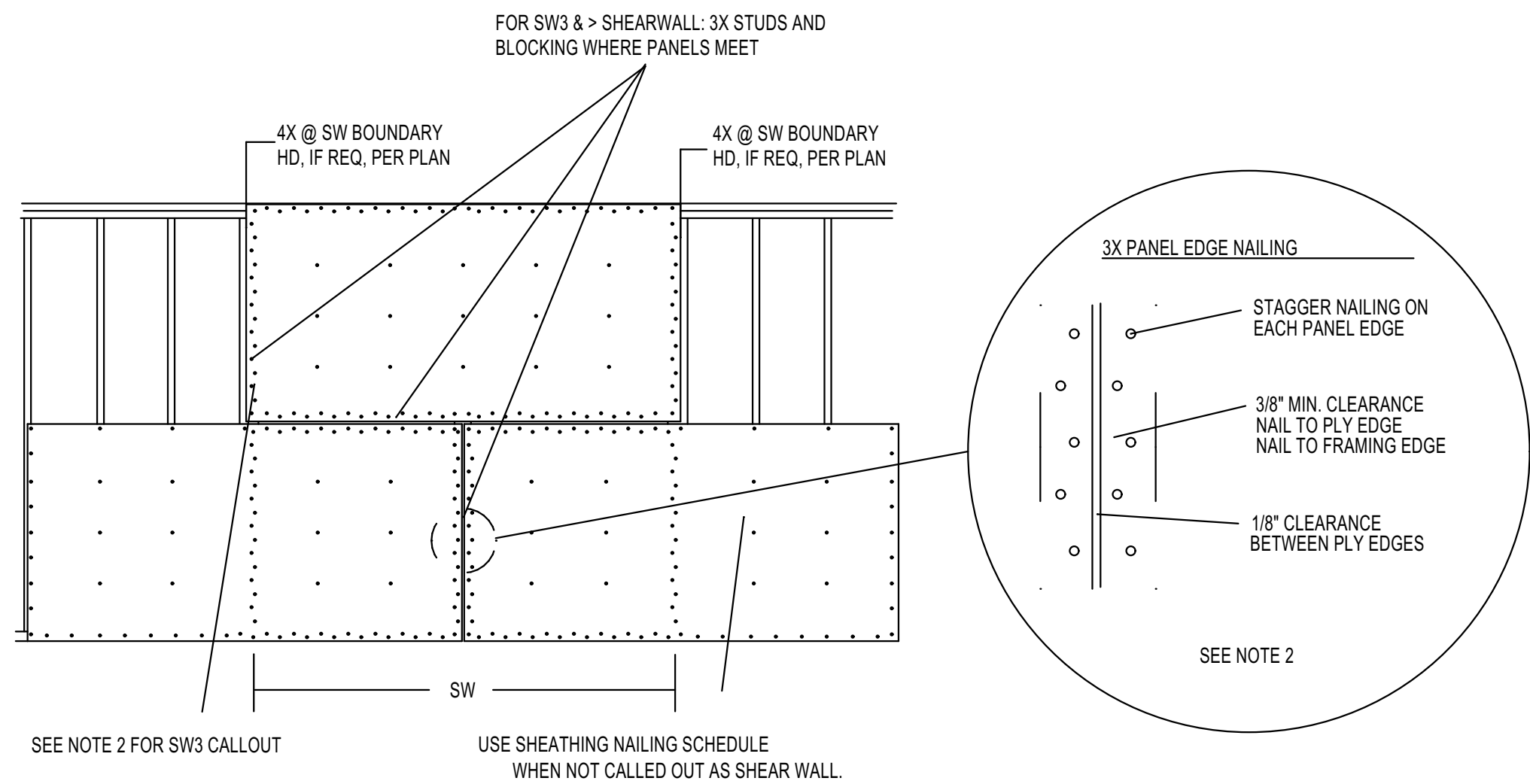
S-505

5 GYPSUM PANEL NAILING
NOT TO SCALE



- KEYNOTES-
- 01 ROOF SHEATHING PER PLAN
 - 02 RAFTER OR ROOF TRUSS PER PLAN
 - 03 EDGE NAILING PER SW SCHEDULE
 - 04 FIELD NAILING PER SW SCHEDULE
 - 05 2X4 BRACING @ 48" OC, MIN 2 BAYS EA WAY
 - 06 2-16D BRACE TO STUD
 - 07 2-16D TRUSS/CJ TO BRACE
 - 08 PLYWOOD PER SW SCHEDULE
 - 09 CONTINUOUS DBL-TP
 - 10 CONNECTION PER SW SCHEDULE
 - 11 CRIPPLE WALL BETWEEN CJ & RR PER SW SCHEDULE
 - 12 WALL PER SW SCHEDULE

A ROOF-INTERIOR SHEAR WALL PERPENDICULAR TO RAFTERS OR TRUSSES



SEE NOTE 2 FOR SW3 CALLOUT

USE SHEATHING NAILING SCHEDULE WHEN NOT CALLED OUT AS SHEAR WALL.

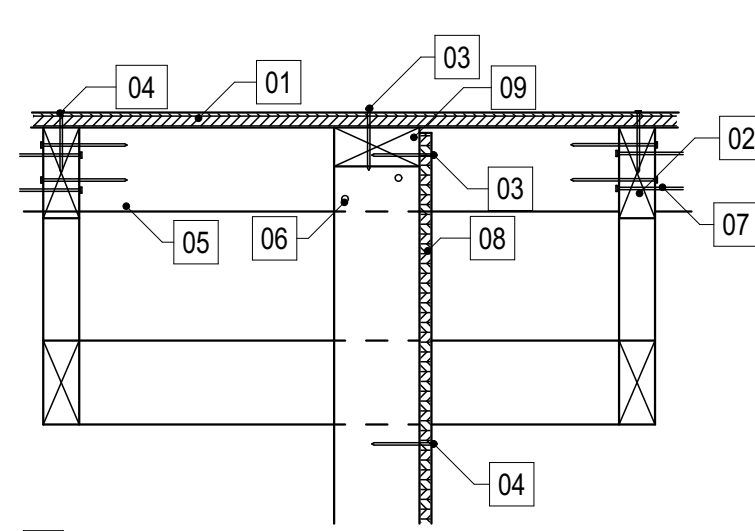
SHEATHING & SHEARWALL SCHEDULE											
SYMBOL	PANEL GRADE	DEPTH	SPAN RATING	NAIL	EN & BN	FIELD	FRAMING	LTP4	A34	ANCHOR	NOTES
SW1	STRUCT I	15/32	32/16	10d	6	12	2X	N/A	N/A	PP	3 - 9 217
SW2	STRUCT I	15/32	32/16	10d	6	12	2X	21" OC	16" OC	PP	3 - 9 490
SW3	STRUCT I	15/32	32/16	10d	4	12	3X	12" OC	9" OC	PP	1 - 9 816
SW4	STRUCT I	15/32	32/16	10d	3	12	3X	10" OC	8" OC	PP	1 - 9 1064
SW5	STRUCT I	15/32	32/16	10d	2	12	3X	6" OC	N/A	PP	1 - 9 1392
ROOF SHEATHING	SHEATHING	15/32	32/16	10d	6	12	PP	N/A	N/A	N/A	5 - 8 N/A
SHEATHING	SHEATHING	15/32	32/16	10d	6	12	2X	NA	NA	72" OC	4 - 10 N/A
SUBFLOOR	I-LEVEL EDGE GOLD	19/32	20	10d	6	12	PP	N/A	N/A	N/A	5 - 8, 11 N/A
SUBFLOOR	I-LEVEL EDGE GOLD	7/8	32	10d	6	12	PP	N/A	N/A	N/A	5 - 8, 11 N/A

- 1) FRAMING MEMBERS AT AJJOINING PANEL EDGES TO BE 3X OR 2-2X (16D @ 12" OC FACE NAIL EACH SIDE)
- 2) STAGGER NAILS ON EACH PANEL EDGE & SW BOUNDARY
- 3) ALL PANEL EDGES TO BE BLOCKED
- 4) MOUNT PANELS HORIZONTALLY OR VERTICALLY
- 5) PROVIDE 1/8" GAP BETWEEN PANEL EDGES
- 6) EDGE NAILS TO BE 3/8" MIN. FROM PANEL EDGES
- 7) NAIL PENETRATION INTO FRAMING TO BE MIN. 1-1/8"
- 8) NAIL DIAMETERS DEFINED AS: 6D (0.089), 8D (0.131), 10D (0.148), 16D (0.162), 20D (0.192)
- 9) REFER TO CONC-ANCHORS & SILL PLATE FOR ANCHOR BOLT DETAILS
- 10) UNO, ALL EXTERIOR WALLS NOT SPECIFICALLY CALLED OUT AS "SW" TO BE SHEATHED PER SHEATHING REQ
- 11) 19/32" PLY FOR JOISTS @ 16 OC, 7/8" PLY FOR JOISTS > 16 OC. APPLY ADHESIVE @ JOIST/PLYWOOD JOINT

GENERAL NOTES -

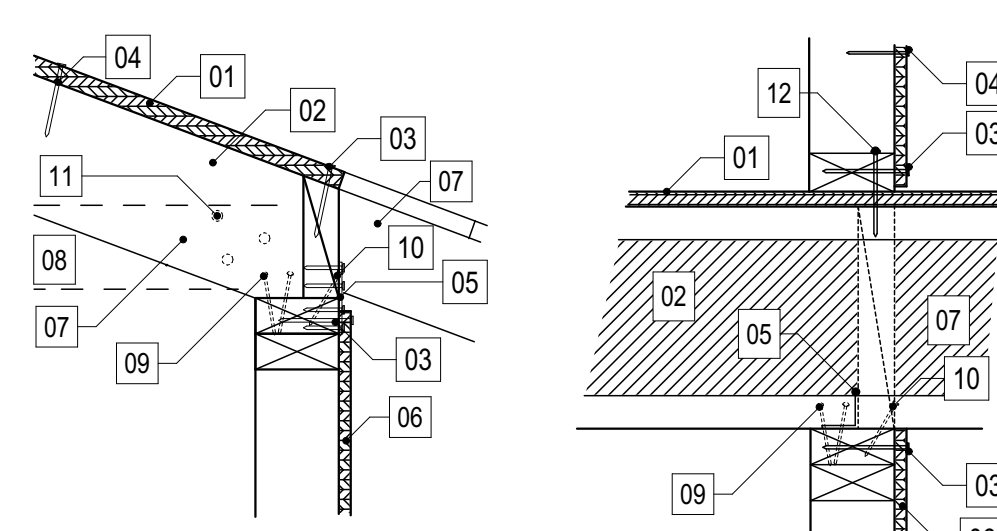
- 51 UNO, ALL EXTERIOR WALLS TO BE SHEATHED. WALLS NOT EXPRESSLY IDENTIFIED AS SHEAR WALLS TO BE SHEATHED PER 'SHEATHING' CALLOUT IN TABLE ABOVE. SEE 'FRMNG-NAILING SCHEDULE' & 'FRMNG-WALL CONDITIONS' FOR TYPICAL CONNECTIONS
- 52 SHEAR WALLS SHALL RUN CONTINUOUSLY FROM FOUNDATION TO ROOF FRAMING
- 53 PROVIDE ONE PLY CLIP BETWEEN EACH JOIST AT ALL UNBLOCKED EDGES OF ROOF & FLOOR PLYWOOD SHEATHING T&G PLYWOOD MAY BE USED THROUGHOUT AS AN ALTERNATE TO USING PLYCLIPS
- 54 WHERE JOISTS OR RAFTER SPACING EXCEEDS 24", PROVIDE T&G PLYWOOD OR BLOCK ALL EDGES WITH 2X4 FLAT WITH SIMPSON "Z" CLIP EACH END
- 55 MINIMUM DIMENSION OF ANY PLYWOOD SHEET IS TO BE 24" AND THE MINIMUM AREA IS TO BE 8 SQUARE FEET. SMALLER DIMENSIONED SHEETS MAY BE USED ONLY IF ALL EDGES ARE SOLID BLOCKED AND EDGE NAILED
- 56 MACHINE NAILING TOOLS USED FOR DIAPHRAGM AND SHEAR WALL SHEATHING ATTACHMENT MUST HAVE ADJUSTABLE DEPTH CONTROL FEATURES. NAILS SHALL NOT PENETRATE THE OUTER PLYWOOD PLY MORE SO THAN IF THE NAIL WAS INSTALLED WITH A HAMMER. IF MORE THAN 20% OF THE NAILS AROUND THE PERIMETER OF ANY PANEL ARE OVER-DRIVEN BY UP TO 1/8", ONE NEW NAIL FOR EVERY TWO OVER-DRIVEN NAILS SHALL BE ADDED (REPAIR PER APA REPORT NO. T94-9). ANY TWO NAILS OVER-DRIVEN BY MORE THAN 1/8" SHALL HAVE AN ADDITIONAL NAIL ADDED. USE HILTI PNEUMATIC NAILS (ICBO REPORT #NER 230), OR HALSTEEL PNEUMATIC NAILS (ICBO REPORT #4296) WITH THE APPROPRIATE GUN AS RECOMMENDED IN THE ICBO REPORT.

H SHEAR WALL & SHEATHING PANEL NAILING & SCHEDULE



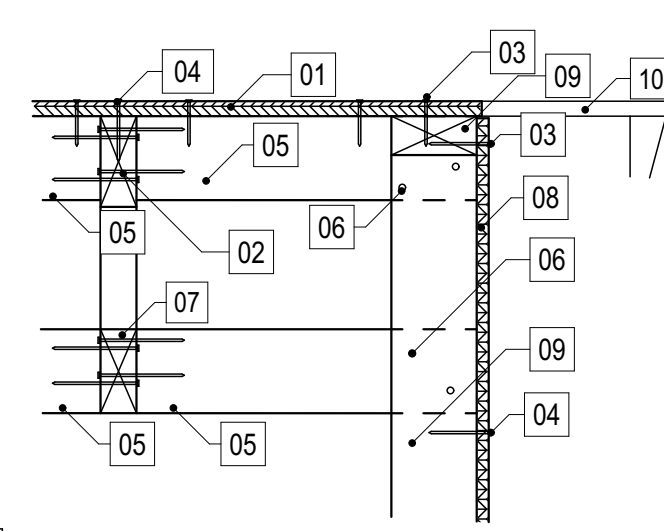
- KEY NOTES
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 - 10 CONNECTION PER SW SCHEDULE
 - 11 CRIPPLE WALL BETWEEN CJ & RR PER SW SCHEDULE
 - 12 WALL PER SW SCHEDULE

B ROOF-INTERIOR SW PARALLEL TO RR OR TRUSS



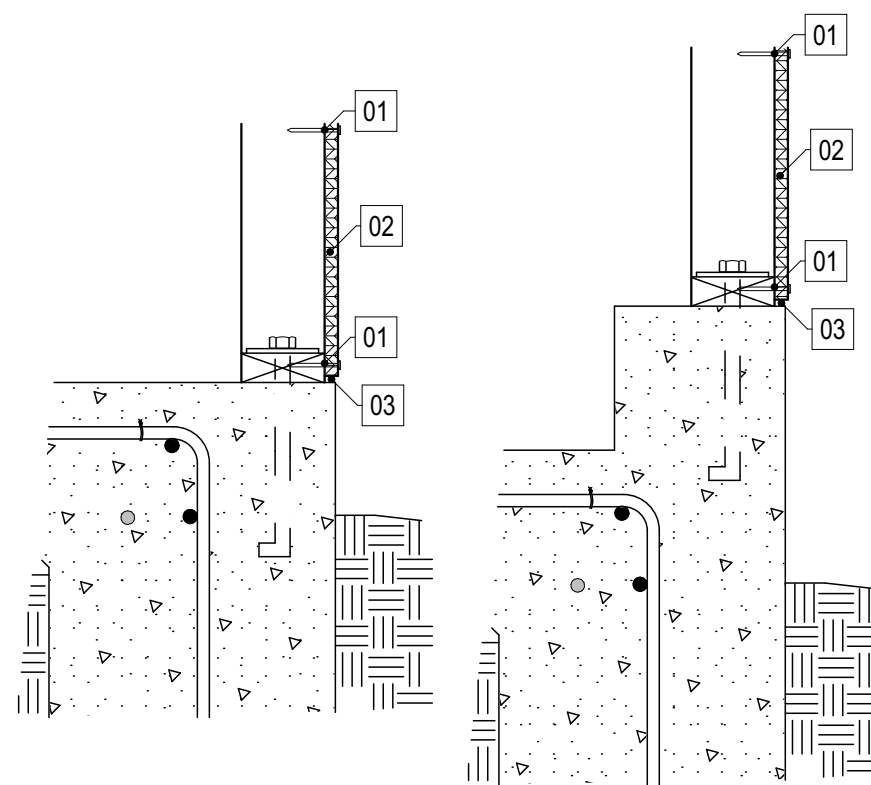
- KEYNOTES -
- 01 ROOF SHEATHING PER SW SCHEDULE
 - 02 RAFTER OR ROOF TRUSS PER PLAN, CONN TO TP PER 'FRMNG-NAILING SCHEDULE'
 - 03 EDGE NAILING PER SW SCHEDULE
 - 04 FIELD NAILING PER SW SCHEDULE
 - 05 TOP PLATE TO BLOCK PER SW SCHEDULE
 - 06 PLYWOOD PER SW SCHEDULE
 - 07 ROOF TYPE, PITCH & EAVE PER ARCHITECTURAL PLAN
 - 08 IF CJ PRESENT, CONN TO TP PER 'FRMNG-NAILING SCHEDULE'
 - 09 RR TO PLATE: 3-8D, TOENAIL
 - 10 BLK TO PLATE: 8D @ 6" OC, TOENAIL
 - 11 JOIST/RR LAPS: 3-16D, FACE NAIL
 - 12 BP TO JOIST: 16D @ 8" OC, STAGGERED

C ROOF-EXTERIOR SHEAR WALL @ EAVE



- KEYNOTES
- 01 ROOF SHEATHING PER PLAN
 - 02 RAFTER OR ROOF TRUSS PER PLAN
 - 03 EDGE NAILING PER SW SCHEDULE
 - 04 FIELD NAILING PER SW SCHEDULE
 - 05 2X BRACING @ 48" OC MIN 2 BAYS
 - 06 2-16D BRACE TO STUD
 - 07 2-16D TRUSS/CJ TO BRACE
 - 08 PLYWOOD PER SW SCHEDULE
 - 09 BALLOON FRAME WITH CONTINUOUS TOP PLATE
 - 10 ROOF TYPE, PITCH, & EAVE PER ARCHITECTURAL PLAN

D ROOF-EXTERIOR SW @ GABLE



GENERAL NOTES -

- 51 NAILS INTO TREATED LUMBER TO BE RATED FOR USE (ASTM A153, CLASS D)

KEYNOTES -

- 01 FIELD NAILING & EDGE NAILING PER SW SCHEDULE. NAILS INTO TREATED LUMBER TO BE RATED FOR USE (ASTM A153, CLASS D)
- 02 PLYWOOD PER SW SCHEDULE
- 03 1/8" MIN CLR BETWEEN PLYWOOD & FOUNDATION WITH 2X SILL PLATE, 1/4" MIN CLR BETWEEN PLYWOOD & FOUNDATION WITH 3X SILL PLATE

J SLAB ON GRADE FOUNDATION-SW @ SILL PLATE

1825 STATE STREET STE 102
SANTA BARBARA, CA 93101
T: 805.845.6601
E: INFO@WINDWARDENG.COM

PROJECT

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221 LA PLATA
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CLIENT

DAVID MARCHETTI
221 LA PLATA
SANTA BARBARA, CA 93109

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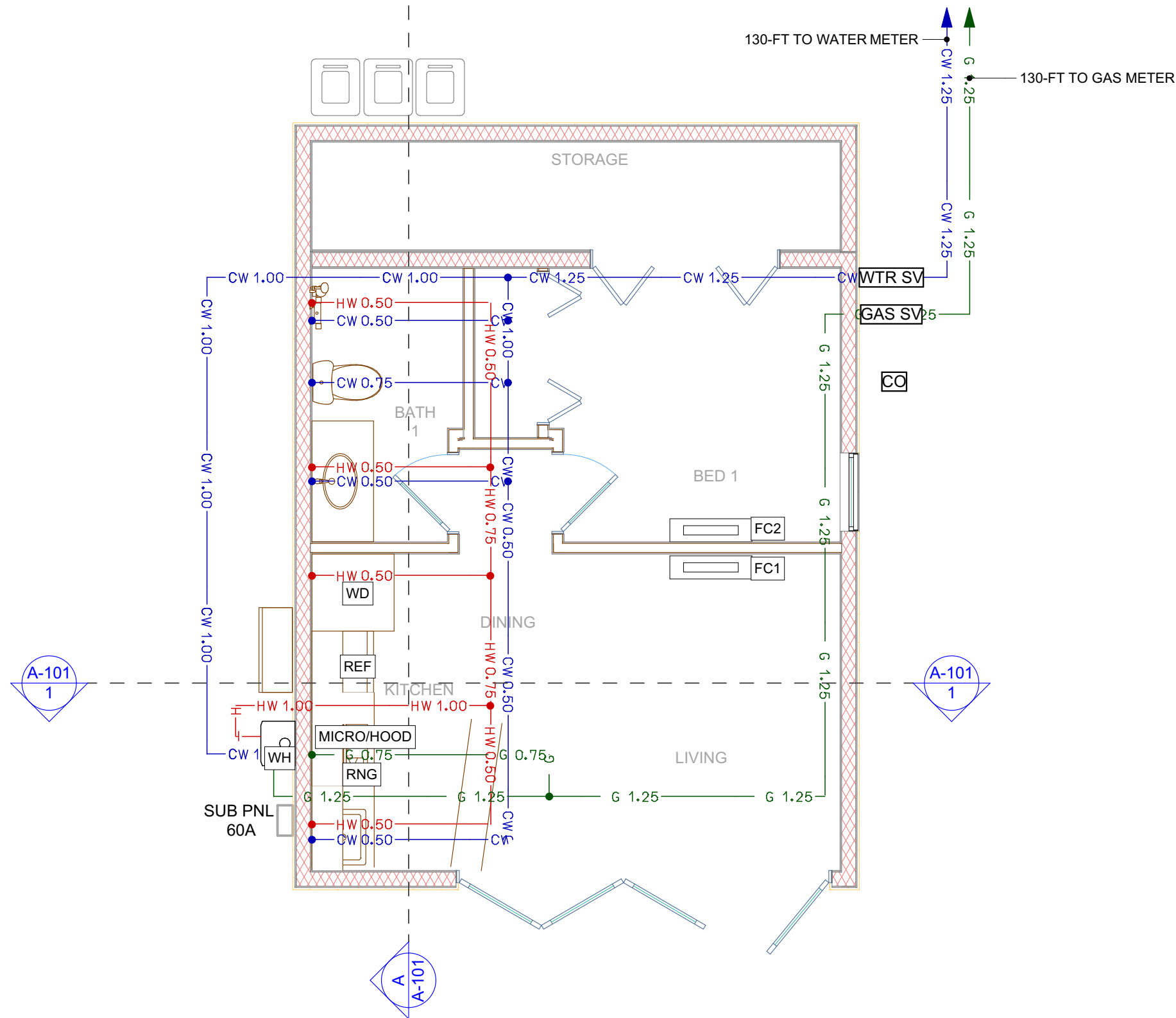
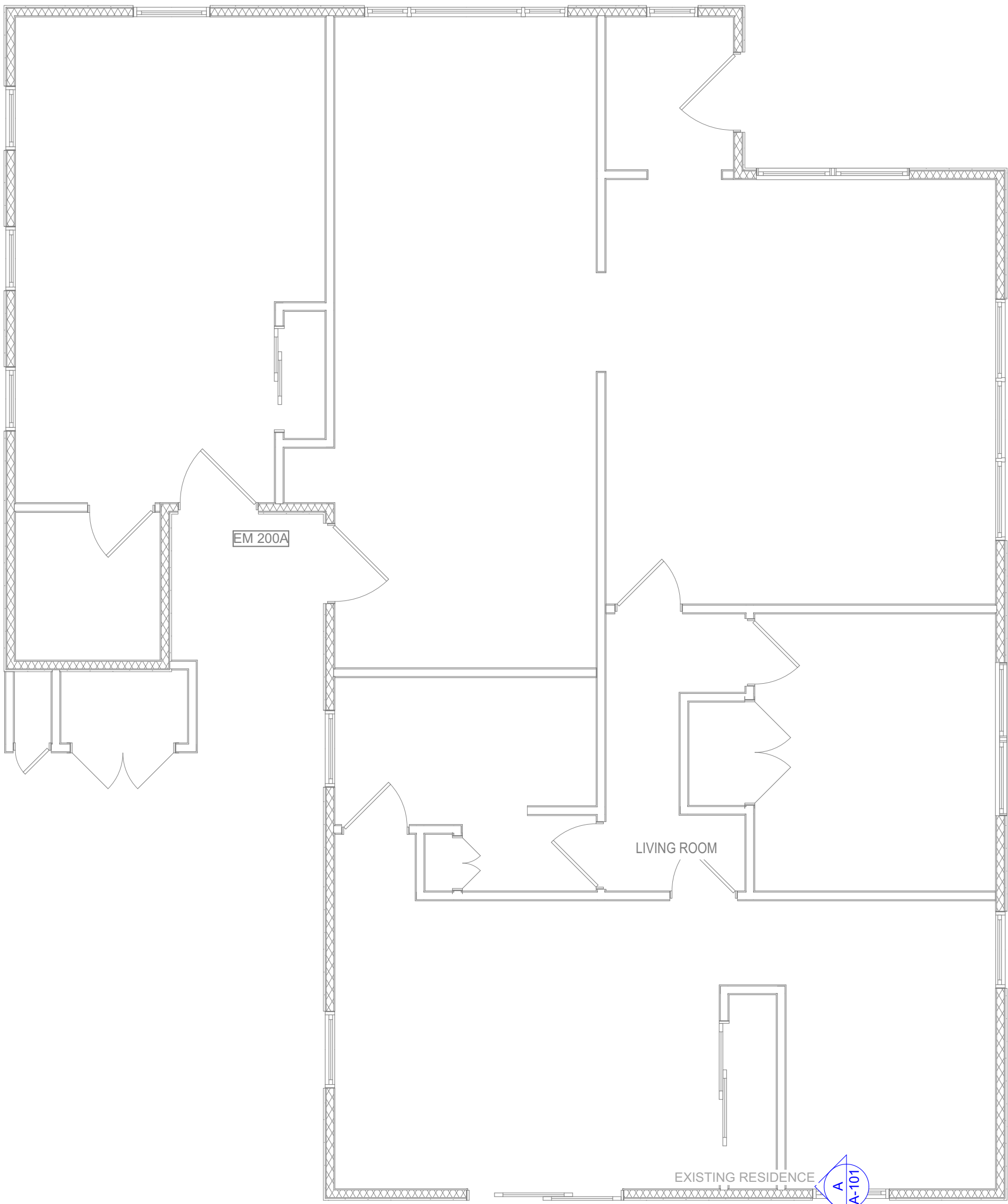
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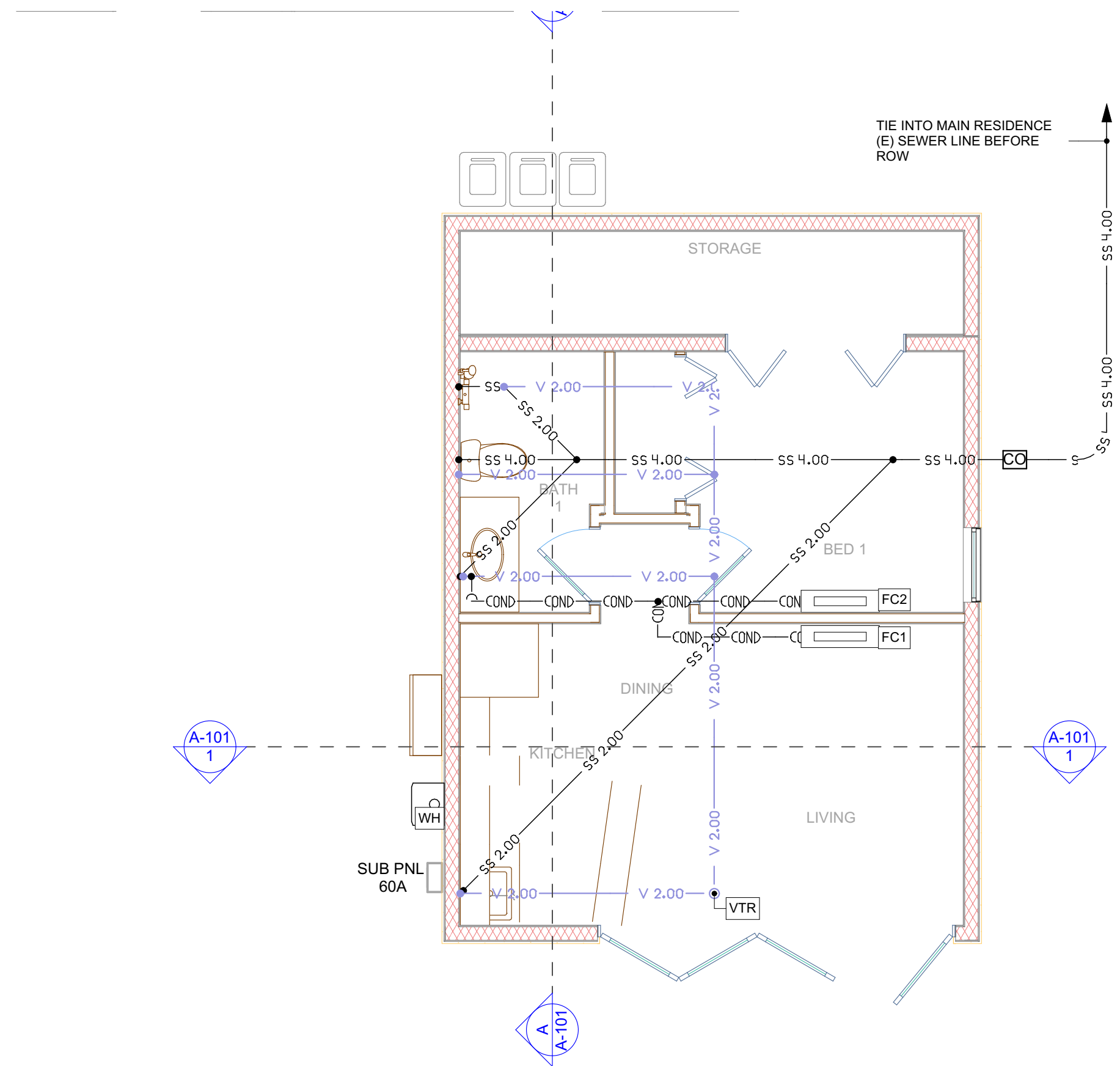
SHEET

SW & SHEATHING DETAILS

S-506



1 PLUMB SUPPLY PLAN
SCALE: 1/4" = 1'-0"



2 PLUMB SEWER PLAN
SCALE: 1/4" = 1'-0"

PLUMBING LEGEND	
— HW XX —	HOT WATER SUPPLY
— CW XX —	COLD WATER SUPPLY
— G XX —	GAS
— GW XX —	GREASE WASTE
— SW XX —	SEWER WASTE
— V XX —	VENT
○	PIPE RISER OR DROP
AAV	AIR ADMITTANCE VALVE ESR-1664
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
WTA	WATER TO ABOVE
WFB	WATER FROM BELOW
GFB	GAS FROM BELOW
GFA	GAS FROM ABOVE
GSV	GAS SHUTOFF VALVE
GTA	GAS TO ABOVE
VFB	VENT FROM BELOW
VTa	VENT TO ABOVE
VTR	VENT TO ROOF
SV	SHUTOFF BALL VALVE
RP	REDUCED PRESSURE VALVE
RPBP	REDUCED PRESSURE VALVE / BACKFLOW DEVICE COMBO
Tg	GAS APPLIANCE SHUTOFF VALVE
WM	WATER METER
GM	GAS METER
FCO	FLOOR CLEANOUT
WCO	WALL CLEANOUT
AD	AREA DRAIN
FD	FLOOR DRAIN
FS	FLOOR SINK
FG	FLOOR SINK TO GREASE LINE
RD	ROOF DRAIN
HB	HOSE BIB
MA	PEX MANIFOLD
WH	WATER HEATER (INSTANT)
WH	WATER HEATER (TANKED)

NOTE: GRAYED FIXTURES / LINES ARE (E) TO REMAIN

WINDWARD design services, llc moving forward	
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SCALE AS NOTED
CREATED BY: WDS
SHEET
PLUMBING PLAN

P-101

S 38° 00' 40" W 100.00'

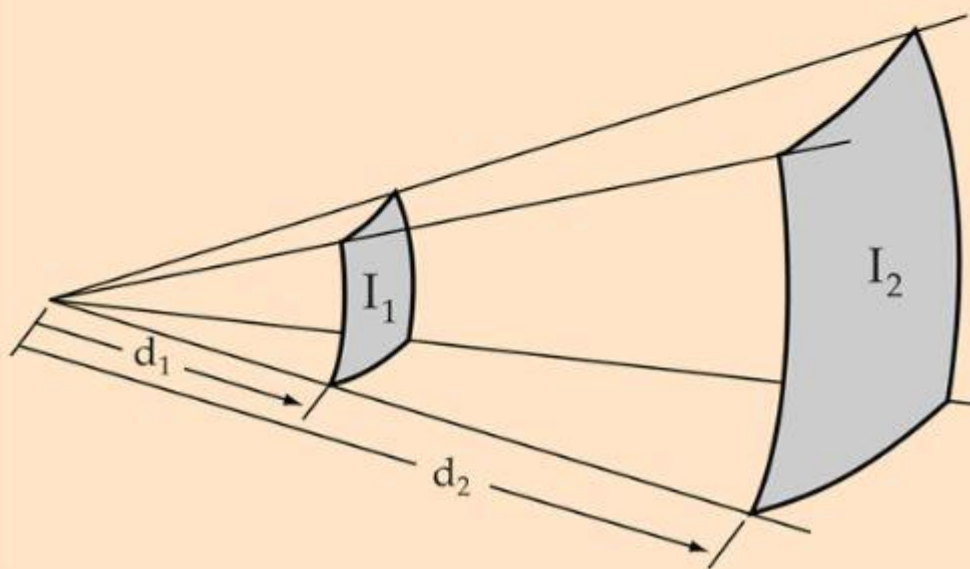
N 38° 00' 40" E 100.00'

Outdoor Unit Model	Maximum dB(A)	
	Cooling	Heating
AM048FMDCHIAA	50	53
AM048FMDCHIAA	51	53
AM053FMDCHIAA	53	55
AM060MXMDCHIAA	58	60

Estimating Sound Levels With the Inverse Square Law

In the real world, the inverse square law is always an idealization because it assumes exactly equal sound propagation in all directions. If there are reflective surfaces in the sound field, then reflected sounds will add to the directed sound and you will get more sound at a field location than the inverse square law predicts. If there are barriers between the source and the point of measurement, you may get less than the inverse square law predicts. Nevertheless, the inverse square law is the logical first estimate of the sound you would get at a distant point in a reasonably open area.

If you measure a sound level $I_1 = 52$ dB
at distance $d_1 = 1$ m = 3.280839 ft
then at distance $d_2 = 4.191$ m = 13.74999 ft
the inverse square law predicts a sound level
 $I_2 = 39.55364$ dB



You can explore numerically to confirm that doubling the distance drops the intensity by about 6 dB and that 10 times the distance drops the intensity by 20 dB.

2 SOUND CALC

SCALE: 1" = 1'-0"

1 MECHANICAL PLAN 1ST-STORY

SCALE: 1/4" = 1'-0"

S 51° 59' 020" E 60.00'

EQUIPMENT SCHEDULE

- HP 1** **OUTDOOR SPLI SYSTEM HEAT-PUMP UNIT**
MITSUBISHI MODEL # NTXMMX20A122AA 208 V, 1 PHASE
COOLING CAPACITY= 1.5 TON SEER=20.7
HEATING CAPACITY= 15.5 MBH HSPF = 10.0
MCA=17.2 MAX. CIRCUIT BREAKER=20
APPROXIMATE OPERATING WEIGHT = 126. LB.
- FC 1** **HORIZONTAL FAN-COIL UNIT**
MITSUBISHI MODEL # NTXWST12A112A 208 V, 1 PHASE
COOLING CAPACITY=12. MBH
HEATING CAPACITY=14.4 MBH AT 47 F AMB
364 CFM AT 0.4" ESP. HIGH SPEED. 0.76 AMPS. MCA=1
MICROBLUE DIAMOND MINI CONDENSATE PUMP. WALL MOUNTED
THERMOSTAT.
APPROXIMATE OPERATING WEIGHT=22. LB.
- FC 2** **WALL MOUNTED FAN-COIL UNIT**
MITSUBISHI MODEL # NTXWST06A112A 208 V, 1 PHASE
COOLING CAPACITY=6. MBH
HEATING CAPACITY=7.2 MBH
201 CFM AT 0.4" ESP. MEDIUM SPEED 0.76 AMPS. MCA=1
MICROBLUE DIAMOND MINI CONDENSATE PUMP. WALL MOUNTED
THERMOSTAT.
APPROXIMATE OPERATING WEIGHT=22. LB.
- EF 1** **BATHROOM TOILET EXHAUST FAN**
PANASONIC MODEL # FV-11-15-VKLJ WITH BACK DRAFT DAMPER
90 CFM AT 0.35" SP. 914 RPM, 0.15 AMPS. ENERGYSTAR.
OPERATE WITH HUMIDISTAT PER TITLE 24 REQUIREMENT.
APPROXIMATE OPERATING WEIGHT= 20. LB.

AIR CONDITIONING LEGEND

SYMBOL	DESCRIPTION
12x12 500	CEILING DIFFUSER, NECK SIZE, IN. Ø AIR QUANTITY CFM
SOLID LINE	SOLID LINE DENOTES NEW DUCTWORK
DASHED LINE	DASHED LINE DENOTES EXISTING DUCTWORK TO REMAIN.
CROSS-HATCHED LINE	CROSS-HATCHED LINE DENOTES EXISTING DUCTWORK TO BE REMOVED.
Supply Air Duct Symbol	SUPPLY AIR DUCT.
Return Air Duct Symbol	RETURN AIR DUCT.
Exhaust Air Duct Symbol	EXHAUST AIR DUCT.
Double Thickness Turning Vanes Symbol	DOUBLE THICKNESS TURNING VANES
Ceiling Diffuser Symbol	CEILING DIFFUSER
Return Air Grille, Relief Grille Symbol	RETURN AIR GRILLE, RELIEF GRILLE
Exhaust Grille Symbol	EXHAUST GRILLE
Ceiling Mounted Fire Damper Symbol	CEILING MOUNTED FIRE DAMPER
Wall Mounted Fire Damper Symbol	WALL MOUNTED FIRE DAMPER
Motorized Combination/Smoke Fire Damper Symbol	MOTORIZED COMBINATION/SMOKE FIRE DAMPER
Manual Volume Damper Symbol	MANUAL VOLUME DAMPER
Remotely Actuated Manual Volume Damper Symbol	REMOTELY ACTUATED MANUAL VOLUME DAMPER
Motorized Damper Symbol	MOTORIZED DAMPER
12 X 6	DUCT (FIRST DIMENSION IS SIDE SHOWN).
12 X 6 (L)	LINED DUCT (SHEET METAL SIZE SHOWN).
SD	DUCT SMOKE DETECTOR
T	THERMOSTAT (MOUNT AT +42 IN. ABOVE FLOOR).
C	CO2 SENSOR (FOR DEMAND CONTROL VENTILATION)
Point of Connection Symbol	POINT OF CONNECTION FROM EXISTING DUCTWORK TO NEW DUCTWORK
S.A.	SUPPLY AIR
R.A.	RETURN AIR
E.A.	EXHAUST AIR
O.S.A.	OUTSIDE AIR
C.D.	CEILING DIFFUSER
R.A.G. R.G.	RETURN AIR GRILLE, RELIEF GRILLE
E.G.	EXHAUST GRILLE

T-24 INSULATION NOTES

- PORTIONS OF SUPPLY AIR AND RETURN AIR DUCTS CONVEYING HEATED OR COOLED AIR LOCATED IN ONE OR MORE OF THE FOLLOWING SPACES SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-8:
- OUTDOORS, OR
 - IN A SPACE BETWEEN THE ROOF AND AN INSULATED CEILING, OR
 - IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR OPENINGS TO THE OUTSIDE OR UNCONDITIONED SPACES, OR
 - IN AN UNCONDITIONED CRAWLSPACE, OR
 - IN OTHER UNCONDITIONED SPACES.
- PORTIONS OF SUPPLY AIR DUCTS THAT ARE NOT IN ONE OF THESE SPACES SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-4.2 (OR ANY HIGHER LEVEL REQUIRED BY C.M.C. SECTION 605, OR BE ENCLOSED IN DIRECTLY CONDITIONED SPACE. C.M.C. INSULATION REQUIREMENTS ARE REPRODUCED IN TABLE 4.4. THE FOLLOWING ARE ALSO REQUIRED:
- MECHANICALLY FASTEN CONNECTIONS BETWEEN METAL DUCTS AND THE INNER CORE OF FLEXIBLE DUCTS.
 - SEAL OPENINGS WITH MASTIC, TAPE, AROBAL SEALANT OR OTHER DUCT CLOSURE SYSTEM THAT MEETS THE APPLICABLE REQUIREMENTS OF UL 181, UL 18A, UL 18B OR UL 723 (AROBAL SEALANT).
 - WHEN MASTIC OR TAPE IS USED TO SEAL OPENINGS GREATER THAN 1/4", A COMBINATION OF MASTIC & MESH OR MASTIC & TAPE MUST BE USED.

CAL GREEN & OTHER TESTING NOTES

- MECHANICAL & PLUMBING SYSTEM DESCRIPTION:**
- TESTING:**
- HVAC:**
1. ACCEPTANCE TESTS SHOWN ON TITLE 24 FORMS
 2. TYPE I HOOD SYSTEM SHALL BE TESTED AND APPROVED BY AHJ
 3. HVAC SYSTEMS AND CONTROLS SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:
TAB'S CONSTRUCTION SPECIFICATIONS INSTITUTE MASTER FORMAT (SECTIONS 23.06.93 AND 15990), OR
NEBB'S STANDARDS FOR TESTING, ADJUSTMENT, AND BALANCING OF ENVIRONMENTAL SYSTEMS (7TH EDITION), OR
AABC'S NATIONAL STANDARDS FOR TOTAL SYSTEMS BALANCE (6TH EDITION), OR
ASHRAE STANDARD 111-2008
- PLUMBING:**
1. PRESSURE TESTS FOR ALL PIPING PER 2010 CPC
 2. DOMESTIC WATER SYSTEM: PER SECTION 609.4 OF 2010 CPC
 3. SANITARY WASTE & VENT SYSTEM: PER SECTION 712.0 OF 2010 CPC
 4. GAS PIPING SYSTEM: PER SECTION 1214.3 OF 2010 CPC
 5. START, FULL LOAD CONSUMPTION AND TEMPERATURE CONTROL TEST FOR THE WATER HEATERS, AND PUMPS
 6. SEISMIC RESTRAINT INSTALLATION
- APPROVAL:**
1. A FINAL REPORT FOR TESTING & ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL BY THE FIELD. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES
 2. AN OPERATION & SYSTEMS MANUAL SHALL BE PROVIDED TO THE OWNER OR REPRESENTATIVE AND TO THE FIELD INSPECTOR AT THE TIME OF FINAL INSPECTION

NOTE:
THE INDICATED SIZE OF ALL LINED DUCTS IS SHEET METAL DIMENSION

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DATE: 4/9/2020

DATES	
1/3/2020	INITIAL
03/03/2020	(E) FENCE SUBMITTAL
03/03/2020	DART RESUBMITTAL
03/18/2020	RESUBMITTAL

SCALE AS NOTED

CREATED BY: WDS

SHEET
MECH PLAN

M-101